

The

RHODESIAN

Registered at the G.P.O. as a Newspaper

FARMER

FARM JOURNAL OF THE FEDERATION



Vol. XXVII No. 37

WELCOME SUNSHINE

The Pig Industry Board's farm nestles at the side of the Enterprise Valley.

Established 1926

January 11th, 1957

Ninepence Weekly



THE BRITISH SOUTH AFRICA COMPANY

(A Company with Limited Liability, incorporated by Royal Charter in England.) Founder: Cecil John Rhodes.

The British South Africa Company owns the Mineral Rights of Northern Rhodesia and extensive Mineral Rights in the Bechuanaland Protectorate and Nyasaland.

In Southern Rhodesia the Company owns large, fully-developed orange groves on its Mazoe, Premier and Sinoia Estates and maize and wheat are grown on its Mazoe, Premier and Simoona Estates.

A modern plant to deal with the extraction of Orange Oil and Concentrated Juice, and other Citrus derivatives, is in operation on the Mazoe Estate.

On the Company's Imbera Estate near Umtali there are established Forestry Plantations and a well-equipped Saw Mill, and the Company has recently acquired for extension of its forestry enterprise a large area in the Melsetter district.

Through its connection with the Rhodesian Milling and Manufacturing Company, Limited, the Company is largely interested in the Flour and Maize Milling Industry in Southern and Northern Rhodesia.



Are they resistant to D.D.T. & B.H.C.?



COOPERS **KILATHON** *Definitely* **KILLS** B.H.C. and D.D.T. RESISTANT FLIES

Science comes to the rescue against resistant flies with an entirely new group of phosphatic insecticides, one of these, Malathion, is the base of Coopers new Kilathon. Malathion is highly selective and it instantly wipes out insects even at very low concentrations, but to all warm blooded animals it is quite harmless. Kilathon is specially formulated for eradicating flies in cow-sheds, stables, piggeries, refuse tips and manure

heaps. Kilathon can be supplied as a dry fly bait or as a spray. The dry fly bait can be left about the farm buildings in tin lids and shallow containers. It will attract flies in their thousands—one touch means death.

KILATHON M.O.50 SPRAY

When used as a spray, mixing is economical—one part Kilathon M.O.50 to 50 parts water, or 3½ ounces to one gallon. The mixture is then sprayed with an ordinary hand pump on to the main breeding places, manure heaps, refuse dumps, and compost pits. Treated surfaces remain lethal to adult flies up to 16 days. Kilathon is effective against all stages of the life cycle of the fly. Egg laden flies are killed before they can lay their eggs, and any flies hatched from maggots below the rubbish are killed upon crawling to the surface.

Kilathon M.O.50 is an ideal surface spray. Walls, lintels and rafters can all be made attractive to flies by adding 4 ounces of sugar to one gallon of diluted wash. It is then brushed on surfaces frequented by flies.

THE SAFEST OF ALL MODERN PHOSPHATIC INSECTICIDES

KILATHON DRY FLY BAIT

in 1 lb. Sprinkler
Tins and 7 lb. tins

KILATHON M.O.50 EMULSION

16 ounce bottles and
1 gallon drums

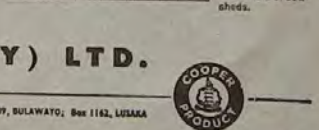
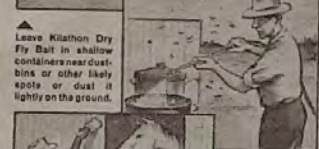
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RHODESIAN FARMER :: 11th JANUARY, 1957.





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in 1 lb. Sprinkler
Tins and 7 lb. tins

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15 ounce bottles and
1 gallon drums

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COOPER RESEARCH BACKS EVERY COOPER PRODUCT

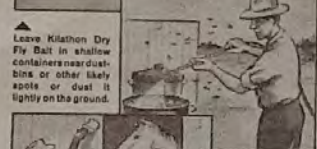
COOPER & NEPHEWS S.Af. (PTY) LTD.

Box 4357, JOHANNESBURG; Box 1843, CAPE TOWN; Box 909, PORT ELIZABETH; Box 108, EAST LONDON; Box 1487, DURBAN; Box 909, SALISBURY; Box 409, BULAWAYO; Box 1162, LUSAKA

RHODESIAN FARMER :: 11th JANUARY, 1957.



Spray the flies' favourite breeding place—the manure heap with Kilathon M.O.50.



Leave Kilathon Dry Fly Bait in shallow containers near dustbins or other likely spots or dust it lightly on the ground.



Spray on rubbish heaps.



Brush it on lintels and doors of stables.



Brush it on walls of piggeries.

Brush it on walls and rafters of cow-sheds.



Complete programme for Tick Control



BLUE TICK—AGRICURA'S DDT-SOL

DDT-SOL destroys the resistant Blue Tick, carrier of red-water and gallsickness. It is a water-miscible solution containing 30% DDT and can be used in the spray race or as a supplement to arsenical dips. Use DEGAMSOL (28.5% DDT and 4% gamma BHC) for spray race treatment of pedigree and dairy stock and for handdressing against all ticks including the resistant Blue Tick.

BONT TICK—AGRICURA'S TOXASOL '80'

TOXASOL '80' is a water-miscible solution containing Toxaphene, extremely effective against the Bont Tick, carrier of Heartwater, as well as other ticks and external parasites — except the resistant Blue Tick. It kills lice and cures mange.

GENERAL TICK CONTROL—AGRICURA'S VELDDIP '10' AND VELDDIP '6'

VELDDIP '10' and VELDDIP '6' are Agricura's new stock dips. They are wettable powders containing 10% and 6% Gamma BHC respectively. Recommended against mange, scab and ticks in general with the exception of the resistant Blue Tick.

EAR AND OTHER TICKS—AGRICURA'S TICK OIL AND TICK OINTMENT

Agricura's TICK OIL contains both DDT and BHC dissolved in mineral oils. It kills ticks such as Bont-legged Ticks, and need only be applied once a month to the ears of animals. Use Agricura's TICK OINTMENT against ticks on udders and other parts.

Supplied by dealers, co-ops. and chemists

agricura

AGRICURA LABORATORIA LTD. • Box 55, Silverton, Transvaal

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MISCELLANY

A PAT ON THE BACK FOR Y.F.C.s

FEDERAL Youth News, the Rhodesian young people's newspaper, recommends in an editorial that youth clubs should take a leaf out of the book of the Young Farmers' Movement. After referring to the fact that many youth clubs have been started in the Federation, only to die after a few months from lack of support, the editorial says: "Many of them would do well to model themselves along the same lines as the Young Farmers' Club Movement, which is one of the most virile and successful youth organizations in the country."

POULTRY FARMING IN CANADA

From D. de B. SPURR, recently returned from a trip to the States and Canada

DURING my recent visit to Canada and the United States, I had the opportunity of visiting several up to date poultry farms. As I know there are several enterprising poultry breeders and egg producers in Rhodesia, possibly some observations on the notes I made may be of interest.

I found that many of the old farmers, formerly apple growers, had gone in for poultry and the hen barns were prominent among the farm buildings. These are usually three or four floors high. My brother has one such barn 35ft. x 25ft. by three floors high housing 2,500 hens with the necessary feed storeroom. From the time the young pullets on arriving at laying age are placed in the barn they never leave until their useful laying age has expired, when they are despatched to the co-op for disposal as broilers.

Quality leaf
ORGANIC
FERTILIZERS
Always sells!

Due to the fact that these birds move very little they are always in fine condition for the table, the flesh clean, white and soft, containing very little sinew.

The fowls stand continuously on a deep straw litter, and great care is exercised by the attendants never to startle them. They are therefore very quiet and tame, allowing themselves to be handled without resistance.

On August 4, I was taken to Port William to see the Cyrus and Manning Els Poultry Layout. This is one of the largest in Canada. Mr. Els sent his son-in-law to show us round. This he did very thoroughly. First we were taken to see the barns, the principal of these consists of two circular houses, one 218 feet and the other 185 feet in diameter, with a central operations room about 20 feet in diameter. The remaining portion being divided radially into pens. All servicing is regulated by time clock. This clock is adjusted to set the motors in motion which operate the feed conveyors and fresh water supplies. It also operates the lighting system, this allows for an even light for a period of 16 hours a day.

Next visited were the incubator rooms. These are large and airy, all finished in white paint. Here stand six incubators each containing 65,000 eggs. Adjacent to this is a finishing-off room, where the hatching trays are placed. This room is also thermostatically controlled with atmosphere of the correct humidity. The period of hatching I was told is eighteen days. The egg handling department is in the basement of the administration offices. Here the eggs arrive on slow moving conveyor and are candled and automatically weighed and sorted and are packed in their cases by women attendants. The cases are then passed to a cool room with, I believe, a constant temperature

For security
ORGANIC
FERTILIZERS
Grow quality!

RHODESIAN FARMER :: 11th JANUARY, 1957.

Ever change a habit?



A lot of people like gin—
and lots more are learning

to like it. Funny thing about gin. People take to a particular brand—which becomes a habit. Maybe it's the bottle, possibly the label—but what of the taste, the aroma? Often a habit can stop one getting these things—much better.

We don't make any extravagant claims for Clubman, but we do believe that it is an excellent gin.

It would be a pity to miss this because of a habit.

Have a
CLUBMAN
for a change

Distilled by the CASTLE WINE & BRANDY Co., (Pty.) Ltd. BULAWAYO.



3-J051R

Fermavite

Promotes the healthy growth
of POULTRY, PIGS & PROFITS!

A concentrated, economical source of the essential B-vitamins—Riboflavin and Pantothenic Acid.

The Symptoms of Vitamin Deficiency

Sound basic rations for poultry and pigs can supply all the proteins, carbohydrates and minerals needed. But such rations are all too often lacking in

the essential B-vitamins. An absence of Riboflavin and Pantothenic Acid should be suspected if any of the following symptoms are noticed.

| CHICKS | MATURE BIRDS | PIGLETS | SOWS |
|--|---|---|--|
| Poor growth. Nervous symptoms. Broken feathers. Paralysis. Curled toes. Inflamed skin. Sore mouths and eyes. Cracked feet. | Loss of vitality. Loss of weight. Susceptibility to disease. Decreased fertility. Decreased hatchability. Dead-in-the-shell chicks. | Stunted growth. Poor food utilisation. Frequent vomiting. Severe diarrhoea. Skin dermatitis. Stiffened limbs. Nerve degeneration. | Piglets born dead. High mortality rate amongst piglets. Decreased milk supply. Poor growth of piglets. |

"Fermavite" Makes Good Vitamin Deficiencies

"Fermavite" is a rich, economical source of the two vital B-vitamins. "Fermavite" contains 45 micrograms per gram of Riboflavin, and 175 micrograms per gram of Pantothenic Acid. Scientific tests show remarkable im-

provement in the weight, health and fertility of poultry and pigs fed on rations supplemented with "Fermavite". Whatever the scale of your pig or poultry farming, "Fermavite" will send your profits soaring.

"Fermavite" also contains:

Choline, Pyridoxin and Nicotinic Acid—for nerve and muscular strength • Iron—for prevention of anaemia • Potassium—for healthy cell formation • Calcium—for sound bone formation • Copper & manganese—trace elements essential in blood formation.

The following Manufacturers of Balanced Rations in Rhodesia use "Fermavite": Farmers' Co-op., Ltd., Salisbury. Harris Bros. & Co., Ltd., Bulawayo. Matabeleland Farmers' Co-op., Ltd., Bulawayo. National Milling Co., Ltd., Salisbury. J. Palie, Ltd., Bulawayo. Rhodesian Malt Products, Ltd., Salisbury. Rhodesian Milling & Manufacturing Co. (Pvt.) Ltd., Salisbury. Bulawayo, Umtali, Gwelo. Wightman & Co., Ltd., Bulawayo and Salisbury.

All enquiries should be addressed to the manufacturers:

N.C.P.

NATIONAL CHEMICAL PRODUCTS Ltd

P.O. BOX 344 GERMISTON TRANSVAAL

of 50 degrees. This storeroom is cleared twice weekly.

I was informed that this layout packed 2,200,000 dozen during the previous 12 months. While they send 72,000 day-old chicks to surrounding farms. The prices of eggs are not subject to violent fluctuation. During my stay they seemed to be about 4s. 3d. While the price of food, mostly pellets, was about £28 per ton.

Fowls handled in this manner do not require as much feed as the range bird. They also maintain a better standard of health. Legs are always clean and head and eyes bright.

The firm of Cyrus and Manning Els were awarded the \$5,000 prize at the Toronto Exhibition.

On my trip by Road Motor Coach through the Eastern states to New Orleans and return through Detroit and over a thousand miles throughout Ontario I saw many hen barns.

On speaking of this layout at Port William to the poultry judge at the Exhibition, he remarked that it was a large proposition for the Maratimes but that at the place he had just left they packaged a quarter of a million dozen

Rhodesians V a week.

FISONS CHAIRMAN HONOURED

MR. F. G. Clavering Fison, Chairman of Fisons, Ltd., the well-known firm of fertilizer and chemical manufacturers, has been created a Knight Commander of the British Empire in the 1957 New Year Honours.

Mr. Fison's honour comes as a reward for services to agriculture. Under his chairmanship, the Company has developed from a small concern in the eastern counties of England into one of the largest in the United Kingdom, South Africa and Rhodesia. He has also expanded the company's activities into the field of pharmaceutical, fine chemical and insecticide

1 wire does the
work of 5!



the **WARDEN**

ELECTRIC FENCING UNIT
LIVESTOCK HELD AT A FRACTION OF THE
COST OF ORDINARY FENCING

- ♦ Simple and speedy to erect
- ♦ Readily adaptable for temporary or permanent fencing
- ♦ High degree of effectiveness
- ♦ Absolutely safe
- ♦ Proved to be effective in keeping out wild pigs

Complete with 6-volt battery, 50 porcelain insulators, wire clips, — and instructions —

£11.11.0

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FERTILIZERS
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Gwelo Branch — 66 SEVENTH STREET.

Umtali Branch — JOTALI BUILDING, MAIN STREET.

Ndola — STRATHMORE HOUSE, KING GEORGE AVE.

Lusaka — WOODGATE HOUSE, CAIRO ROAD (to be opened early in 1957).

HEAD OFFICE — 54 Parliament Street, London, S.W.1.

All types of Personal and Commercial Banking are undertaken, and the Bank's experience is always at the disposal of customers

A kindly welcome is assured to all enquirers.

SOUTHERN RHODESIA OFFICIAL EGG LAYING TEST

1957/58

(16313)

The Thirty-Eighth Test will commence on the 1st March, 1957.

Entries close Thursday, 31st January, 1957, and will be accepted only from certified B.W.D.-free farms.

For entry forms and all particulars apply early to the Chief Poultry Officer, Department of Research and Specialist Services, P.O. Box 8025, Causeway, Salisbury, Southern Rhodesia.

manufacture and was largely responsible for the decision to take over the interests of Pest Control Ltd.

Mr. Fison last visited Rhodesia in 1951, when Lord Malvern (then Sir Godfrey Huggins) opened the company's fertilizer factory at Aspidale Park.

PIG CO-OP. MATTERS

THE Rhodesian National Pig Breeders Co-operative announces that for the first nine months of 1956 a net profit of just over £37,000 has been made. Over 33,000 baconers and over 12,000 porkers, a total weight of over six million pounds, have been slaughtered for which producers have received £517,386.

In an announcement referring to a breakdown in the negotiations with Messrs. R. H. Thompson and Co., the Board of the Co-op states that whatever the outcome of negotiations with other firms it has for some time been their opinion that greater energy should be directed to the development of Federal and adjacent markets. The Board's statement goes on to say that consumer reaction indicates how successful have been improvements in finished products. A number of new lines are now in production, designed mainly to take care of those parts of the pig which previously proved an embarrassment.

LONDON MEETING TO PREVENT DISEASES

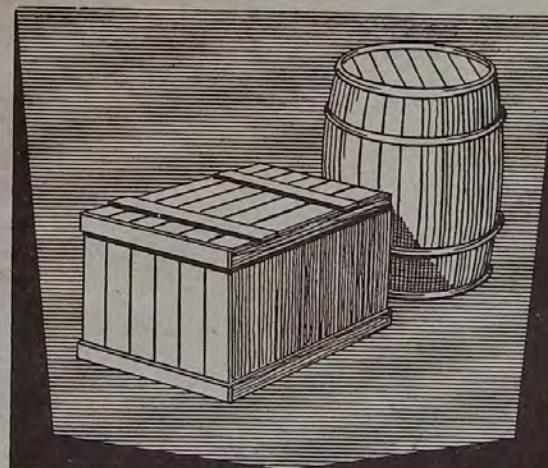
THE Chief Entomologist of the Federal Ministry of Agriculture, Mr. J. A. Whellan, recently returned to Salisbury from London, where he represented the Federation at the first meeting of the Inter-African Phytosanitary Commission.

In an interview, Mr. Whellan told "The Rhodesian Farmer" that the main purpose of the Commission is to prevent the introduction into Africa as a whole

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ORGANIC
FERTILIZERS
Builds prosperity



**Don't wreck a year's work
with bad floors**



The floors of your storage, grading or drying sheds are just as important as their roofs. Cracked or uneven floors—or floors that 'sweat' are a source of profit-killing damage.

COLAS Cold Bitumen Emulsion provides an ideal all-purpose surface. Quick and easy to lay, a Colas surface is perfectly even, does not sweat—is clean, dustfree and exceptionally durable.

COLAS is best for the floors of; Grading Sheds, Tobacco Drying Sheds, Storerooms, Warehouses, Barns and Maize and General Produce Sheds and Silos.

A COLAS floor is completely odourless and non-tainting.

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specify*



**RHODESIAN COLAS
PRODUCTS LIMITED**

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P.O. BOX 306, N'DOLA

South Africa: Johannesburg, Cape Town, Durban, East London

it's got everything

It looks right, it feels right, it shoots right. And it's packed with features that add more than a touch of luxury. What more can a man ask for!



5-SHOT DETACHABLE BOX MAGAZINE



TWIN EXTRACTORS AND RECESSED BOLT FACE



RATCHET SIGHT AND TANGENT SIGHT

The walnut stock is fitted with a cheek piece to give greater comfort and additional facial support, ensuring more accurate shooting.



Full details obtainable from Factory Representatives:

Stansfield Ratcliffe & Co. (Rhod.) Ltd.

P.O. BOX 254, BULAWAYO, AND
P.O. BOX 1263, SALISBURY.

of any pests or diseases which are not so far established here. The Commission discussed the best ways of achieving this object and decided that the basic necessities are adequate and uniform legislation, the provision of quarantine facilities and efficient information services. Substantial agreement on all points was reached, but it was recognised that there were difficulties due to the fact that certain African territories do not adhere to the convention to which the Commission owes its origin. It was decided to invite these countries to join the Convention.

The first task of the Scientific Secretary to the Commission will be to collate information on the distribution of pests already established in Africa, and to gather details of legislation at present in force in the various territories, with a view to securing uniformity.

Countries represented at the meeting included South Africa, France, Great Britain, Portugal and Belgium.

U.S. AND SUEZ

THE United States is already licking its lips over the closing of the Suez Canal, quite apart from any benefits it may bring the U.S. Oil Industry.

Of 87 million tons of cargo which moved northwards through the canal last year, a spokesman of the Foreign Agricultural Service said that 12 million tons were agricultural commodities destined for consumption in Europe. Included in the figure were 24 million tons of grain, 3 million tons of oil and oil seeds and 1 million bales of cotton, and the U.S. spokesman anticipated that a considerable portion of the products would now have to be purchased in the United States. Australia is likely to be one of the major victims of any shift in purchasing of this sort.

Your soil will
ORGANIC
FERTILIZERS
reward you!

MILK PRICES

THE Agricultural Marketing Council and the parties concerned have not yet been in a position to fully consider milk prices and in the circumstances it has been agreed to carry on with existing arrangements for a further period of three months.

CIDER INDUSTRY FOR INYANGA?

IN 1950, the Horticultural branch of the Ministry of Agriculture imported a selection of grafts (scions) of the fifteen most popular varieties of cider apples from the West of England. They came from the Deciduous Fruit Research Station at Long Ashton in Gloucestershire which is run under the auspices of Bristol University.

Mr. C. N. Hayter, Chief Horticulturist, explained to a "Rhodesian Farmer" representative that it was too early as yet to tell which varieties were the best for the warmer conditions pertaining in this country, but that samples of some seven varieties which fruited last year, have been tested for acidity and sugar content. These were found to be similar to cider apples grown in the West of England. The scions were grafted on to established trees, and those varieties that have since cropped, are Dackwell Red, Dabinette, Sweet Coppin, Tardive Forestier, Tremlett Bitter, Kingston Black and Yarlington Mill.

A modern cider press is being imported from England for experimental purposes, and Mr. Hayter said that the present idea is to have the real cider apple to blend with the blemished fruit of culinary varieties which do well at Inyanga.

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FERTILIZERS
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The DC 7B's flown by South African Airways are the fastest piston-engined aircraft in the air. These spectacular aircraft cruise high above the weather at 6 miles a minute. Aboard, you'll find comfort and service second to none.

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For full details, see your Travel Agent or your nearest South African Airways office.



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Specialists in Cattle, Land and Property.

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Estate Agents and Valuers

P.O. BOX 12

UMTALI

Pedigree Frieslands and Africanders

At 10.30 a.m., Wednesday, 30th January, 1957
at Mr. J. A. Kok's Farm, "De Rust," 5 miles from Tsungwesi Siding
Mr. J. S. Holland, favoured with instructions from J. A. Kok,
Esq., will sell:—

FRIESLANDS:

- 7 Registered Friesland Cows.
- 1 Registered Friesland Bull (two years old).
- 9 Pure Bred Friesland Cows.
- 10 Pure Bred Friesland Heifers (20 months).

AFRICANDERS:

- 10 Registered Africander Cows with five Calves.
- 6 Registered Africander Bulls.
- 20 De-horned Pure Bred Africander Heifers.
- 20 Pure Bred Africander Cows.

DIRECTIONS: Turn right 10 minutes from Inyazura on main road to
Umtali and follow indicators.

J. S. HOLLAND, Auctioneer.

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MESSRS. GILCHRIST & COOKSEY (Pvt.) LTD., favoured with
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AT THE ENKELDOORN STOCKYARDS
On THURSDAY, 24th JANUARY, at 10.30 a.m.

300 HEAD 300

Entries include slaughter stock of all descriptions, mediums, com-
pounds, tollies, heifers, etc.

FURTHER ENTRIES SOLICITED

AGENT: C. Doherty, Esq., Enkeldoorn.

GILCHRIST & COOKSEY (Pvt.) LTD., Auctioneers.

DRIED ONIONS

Information for Farmers and
Market Gardeners, from the
Ministry of Agriculture.

ONION importation into the
Federation for the months
of September to January in-
clusive are subject to import
control. No permits to import
them are issued during this
period provided locally grown
crops are sufficient for our
needs.

As some growers may not
be aware of the situation and
are delaying the marketing of
onions, in their own interests
it may be an advantage to
dispose of them before un-
restricted importation com-
mences from the 1st February.

With the Cape main crop
of onions being available,
growers selling on the open
market may then find it diffi-
cult to dispose of their onions
except at prices lower than at
present.

INYANGA FRUIT AND FLOWER SHOW

THE annual Inyanga Fruit and
Flower Show is scheduled to
take place this year on Saturday,
19th January, at 12 o'clock, in
the Rhodes Estate Hall.

LAND SETTLEMENT BOARD

THE following have been re-
appointed to serve as mem-
bers of the Land Settlement Board
for a further period of two years
from 12th January, 1957:—

J. V. Danckwerts, Esq.; Capt.
R. D. James, M.C.; J. Jamieson,
Esq.; Major H. G. Mundy,
C.B.E.; and Major E. R. B.
Palmer.

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Union, Rhodesia Tobacco Associ-
ation, Intensive Conservation Au-
thorities and the Federation of
Young Farmers' Clubs.

Established in 1928 as "Country-
side".

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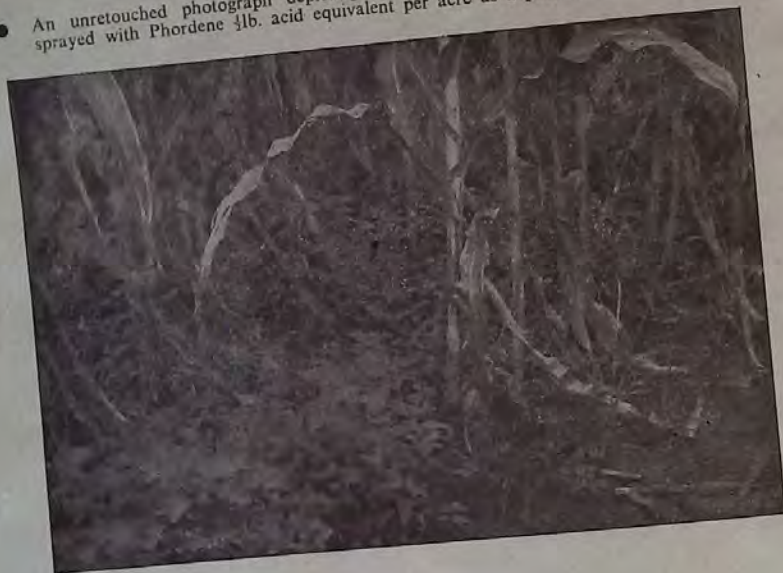
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COMMENT

IN 1955—the figures for 1956 are not yet available—the Federation spent over two million pounds on the import of wheat and flour. With the urban African turning more and more towards bread as a substantial element in his diet and with the increase in population the cost of importing wheat is likely to rise steeply.

At the same time, the Federation is producing a surplus of maize, the cost of exporting which for the next two years is going to fall partly on the farmer and partly on the general community.

In the present world shipping situation, it is likely to be difficult to obtain cargo space both for the wheat we need to import and the maize we shall have to export. The movement of these grains adds another strain to our groaning railways.

The overall benefits both to the Federal economy in general and to agriculture in particular if the present unbalance in grain production could be corrected must be obvious. If wheat could be grown economically, the maize surplus would probably vanish, for when yields and financial returns are comparable wheat is in many ways a more attractive crop, especially at a time when agricultural labour is short. Wheat lends itself more readily to mechanised production, harvesting, and handling than does maize.

In the circumstances, would it not be reasonable to expect that the Government would be prepared to make a large investment to develop wheat production? Yet it would seem to be continuing in its traditional policy of saving a hundred pounds one year at the cost of spending a thousand later. The money that has and will be poured down the drain—lost forever—through a reluctance to anticipate a problem is usually four or five times as much as would have been required to provide a timely remedy. To give but one example, the losses arising from the lack of adequate storage facilities of maize and the continuance of the wasteful system of using sacks instead of bulk facilities are much greater than would have been the expenditure on efficient and modern silo accommodation which would also have been a permanent capital asset.

It is futile to say at any given time that the funds are not available, for in the long run very much more money has to be—and always has been—made available. What is happening, the longer the present policy continues, is that an ever greater proportion of the national income is being frittered away on unproductive contingency expenditure, such as the million odd pounds which losses in storage and the export of the existing maize surplus will doubtless absorb, while funds for productive capital expenditure are proportionately reduced.

WHEAT OR WEEVILS?

Here, at this point, is an opportunity for the Government to break away from this improvident policy. By accepting the cancellation of the existing maize agreement two years before its term expired, the producers in the Federation are saving the State from 1/6 to 3/6 per bag, which on a delivered crop of five million bags represents anything from three hundred and seventy-five thousand pounds to eight hundred and seventy-five thousand pounds in one year. In 1958, the saving will be greater still, unless there is climatic disaster.

If but half of the money that will not now be required in one year were to be spent over five years on solving the problem of producing effective wheat strains, both for winter and summer, there surely would be good prospect of success. The costs for equipment and facilities would not be large, so that most of the money could be spent on buying brains and energy. And very much more than standard civil service scales would have to be offered on short term contracts to the best available experts which money can buy. For sixty to seventy thousand pounds a year, some profitable purchases of ability could be made.

It must be almost useless to go on fiddling with the problem of wheat strains in the way that present research is conducted, and it would merely be an improbable stroke of luck if from all the uncoordinated, underpaid, understaffed work being carried on in Salisbury, at Mount Mkulu and Sabi some solution to the problem were discovered.

And for an investment of sixty to seventy thousand pounds a year, imports, which will probably soon amount to three million pounds a year could be saved; a substantial proportion of grain production could be shifted from maize to wheat; and a crop would be available for new settlement areas. The return to the Federal economy in cash alone would be a rich one, and the basic structure of that economy greatly strengthened.

It is a sad comment on human frailty that only in time of war are tasks undertaken and problems solved which in peace would be dismissed as impracticable, and that money is made available which was said not to exist. The problem of finding rust resistant and economic strains of wheat for the Rhodesias is unlikely to be either intractable or ruinously expensive. But it should be tackled as a national enterprise, and not as a side-line for a couple of unlucky experts to potter around with.

The present methods may provide material to quieten questioners in the House, but it is unlikely ever to provide bread for Rhodesians. And even in the unlikely event that five years brought complete failure, the cost would hardly be more than the money already agreed to be wasted on providing food for beetles and weevils.



BENMORE DANNY'S SILVER STREAK. Champion Ayrshire Bull, Champion Pair by same sire and Champion Rhodesian Bred Heifer on Show at Umtali, 1956. Champion Dairy Bull, Champion Ayrshire Bull and Champion 2 to 3 years Bull and Winner of the Viscount Malvern Trophy at the Royal Show, Salisbury, 1956. Bred and owned by Porters Hillside Estates, P.O. Box 476, Umtali. Porters also took the Champion Dairy Pair and the Champion Ayrshire Pair at the Royal Show.



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RHODESIAN FARMER :: 11th JANUARY, 1957.

In this, the second of his articles on developments in the Sabi, "Rustic" discusses those who are already farming in the valley.

"Rustic" visits Sabi

THE VALLEY OF PROMISE

(ii)

THE PATHFINDERS

TO follow up the work done on the Sabi Experiment Station under Doctor Converse, it was first intended to open up twelve pilot farms each of about 100 acres of irrigated land, but, on second thoughts one guinea pig was considered to be enough to begin with, and the choice fell on Jack Cohen. His qualifications were experience with Sussman and Newfield, £4,000 capital and courage. He seemed, after a brief encounter, to "Rustic", also to be well endowed with the obduracy and even intellectual conceit of his race—no handicaps in a pioneer—and is assuredly blessed with two other valuable assets, a sense of humour, and a good wife.

It is well that the settlement plan is to proceed slowly, for it seems that much can already be learnt from the experience of the one pilot farm. In the first place its lay-out is atrocious, and surely that mistake will not be repeated by the Department of Conservation and Extension in future farm plans. The terracing has been so designed that there are over 270 small individual lands in the somewhat more than 100 acres. The ground wasted when planting and cultivation is done by machin-

ery and the laboriousness of working such small units can, it is hoped, be imagined. However greater the original capital cost, future farms must be levelled and laid out in lands of about five acres each.

The basis of the pilot settlement scheme is that the farm should be prepared for working, the canals and waterways prepared, and the house built, so that the incoming settler can start operations immediately. He will be expected to observe rotations and a farming pattern worked out from experience gained at the Experiment Station.

Considerable latitude is, however, being allowed to Cohen in the first years. He only arrived last December, which was too late, and to enable him to get off to a good start, the planned rotations have been shelved for a while; when "Rustic" was there, the whole of his farm was down to maize.

One farmer on his own will not prove very much, other than that the lands can be worked and that the climate and environment of the Sabi is, in spite of its old reputation, well suited to the white settler. His farming pattern will be peculiar and he



Jack Cohen who has leased the first pilot farm to be opened in the Sabi Valley.

will not be faced with the marketing difficulties which may arise when twenties farm where one now does; for example, he could probably make quite a good thing out of dahl, for which there is a good market among the Rhodesian Indian community for the bean—a market which would soon be absorbed—besides its value as a green crop.

Jack Cohen's task is to survive—which he undoubtedly will—and from his experience will be gained much valuable data to supplement the necessarily theoretical calculations of an Experiment Station. May his survival be as prosperous to himself as it will be valuable to those who follow him.

Sabi-Tanganda Estates

Less than thirty miles from the Station is another venture, independent from it, although now there is of course the closest co-operation and healthy rivalry between Mr. Cameron, the General Manager of Sabi-Tanganda Estates and Dr. Converse. Unlike its

(Continued overleaf)

"RUSTIC" VISITS SABI (Continued from page 15)

predecessors, the Sabi-Tanganda company has fought its battles without Government assistance and achieved profitability, thanks to a combination of shrewd management on the spot and equally shrewd marketing organised by Mr. Green, the director in Salisbury.

The original concern tried to grow sisal, and there are much in evidence the remnants of the first plantations. Their successors also unsuccessfully tried to grow fibres for the notorious Umtali Jute factory. Experiments were also made under the present ownership to grow hibiscus as a substitute for jute, but although a good fibre was produced, stripping and retting difficulties made

it an expensive crop when the world price of jute fell. Later experience and new machines may, however, bring fibre back into the picture, and thus at last justify the Umtali factory's existence, but this possibility will be discussed in the next article.

Tobacco has only just been abandoned; it was successfully enough grown at the low altitude but quality did not match quantity and it was felt to be too speculative a venture when the available time and energy could better be diverted to sounder propositions.

Successful Crops

Among the most successful crops have been vegetables, especially summer vegetables, when heavy rains elsewhere depress yields. Tomatoes from Sabi-Tanganda go as far afield as Kitwe, all consistently graded and packed. It was interesting to see the cucurbits growing between maize. This enables fruit fly control for the flies are sprayed when they settle on the maize, the leaves of which protect the squashes and cucumbers from the harmful D.D.T.

Maize itself has been profitable, there being available to Sabi-Tanganda Estates large local consumers such as the Wattle Company. Maize is ground on the Estates for such purchasers and sold as meal. Wheat has been tried. The fact that the best crop was destroyed by elephants indicates the special hazards of the area.

Lucerne

It is interesting to compare the actual experience of Sabi-Tanganda with the calculations of Dr. Converse concerning lucerne. There are two hundred acres already under lucerne at the Estates and the planting of a further two hundred acres is imminent, a quantity which will have a marked effect on the existing market for the commodity in S. Rhodesia. Of the eight or nine cuts possible in a year, two or three cuts are lost due to weather and other causes, and the average marketable yield is 6 tons per acre per year. Tripod stacking has proved

(Continued on page 18)



The lay-out on Mr. Cohen's farm, showing the narrow terraces, which average less than half an acre each.



Tripod stacks for lucerne hay are being used successfully. The poles are made from the trunks of the overgrown sisal plants, and the special polythene cover adds greatly to the protection of the stack.

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MIXING

Bont-Tox mixes with all types of water. Shake the drum thoroughly before use. Measure out the required amount, add an equal volume of water, mix well and add the mixture to the water in the dipping or spray tank. Do not add the concentrate to the water. Mix the contents of the tank thoroughly before you start to dip or spray.

DILUTIONS

Without arsenic: For dipping use 1 gal. **Bont-Tox** Miscible Oil in 300 gals. of water. Top up at the rate of 1 gal. **Bont-Tox** to 200 gals. of water. For spraying use 1 gal. **Bont-Tox** in 375 gals. of water. With arsenic: (at prescribed strength, 0.16% As_2O_3): For dipping use 1 gal. **Bont-Tox** in 375 gals. of arsenical dipwash. Top up at the rate of 1 gal. **Bont-Tox** to 250 gals. of freshly added arsenical dipwash of correct strength.

Hand Dressing: Use $\frac{1}{4}$ pint in 5 gals. of water.

INTERVALS

For ticks and flies: Dip or spray at 7 day intervals. For Lice: Dip or spray twice at 14 day intervals. For mange: Dip 3 times at 8-10 day intervals. Caution: Do not add **Bont-Tox** to any wettable powder.

BONT-TOX

Cattle Dip and Spray

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"RUSTIC" VISITS SABI (Continued from page 16)

successful. From 200 acres, one hundred tons a month of more meal can thus be produced, and under the new programme 200 tons per month of hay or meal, with a much higher protein content than is available from the Union will be put into the Rhodesian market. This scale of production should suggest caution to those who may be thinking of lucerne production in the much less suitable high veld areas.

Mr. Cameron's experience is that fertilization of lucerne—and he is inclined to prefer Hunter's River—is economic.

Stock

The success achieved with store cattle at Sabi-Tanganda was referred to in the last article. With the ample fodder available, feeding has proved profitable, but one of the difficulties has been to find reliable sources of supply of suitable cattle. The remoteness of the Sabi from good breeding areas and the excessive profitability of moderate animals fed off the grass has handicapped what should be the natural development of quality beef production on the Estates. Some ranchers nearby, when sending cattle, for example, have inadvertently confused two teeth with two years, but it must be admitted that the telephone can be indistinct.

On the eight or nine thousand acres available in addition to the 1,000 acres under irrigation, a start has been made to produce their own breeding herd, of good native cows put to Aberdeen-Angus bulls.

Pigs are successful. There being 106 breeding sows on the Estates, mainly Large White with the odd surviving Black retained probably for sentimental reasons. Landrace blood is being introduced. Apart from the by-products, such as low grade vegetables, all the feed is available on the farm except for animal protein. As soon as weaned, the piglets are placed in weaning pens to give them a good start, then they are sent into paddocks and

brought back into pens to be finished off. At present lucerne is brought to them in the paddocks, but it is intended that they shall graze themselves in lucerne pastures.

For the future, experiments are continuing with fibre crops, and it is intended to put down 20 acres to cotton as a trial.

Whatever the long term prospects of the area, the greatest credit must be given to those at Sabi-Tanganda, notably Mr. Cameron on the land and Mr. Green in the head office, for proving for the first time that a com-

mercially successful venture can be run in the Sabi area without State aid. The risks are still enormous, for the success of the Estates depends on the undammed Tanganda which has failed before and may fail again, and is precariously balanced in existing markets. Forced and subsidised developments in the area, before markets have expanded, could threaten the prosperity of these genuine pioneers, a danger which will be more fully discussed in the next article which will cover the economic aspects of future development.



Mr. Cameron, General Manager at Sabi-Tanganda Estates, standing next to a trial plot of fibre plants.

THE FARMER AND STOCK-BREEDER YEAR BOOK

READERS of "The Rhodesian Farmer" may feel that an English Year Book is of little interest to farmers in Central Africa, but in the case of The Farmer and Stock-Breeder Year Book they would be quite incorrect. For most of the sections will be as useful to the Rhodesian farmer as they undoubtedly are to his English counterpart. For instance, a mare, a cow, an ewe or a sow takes as long to produce her young in Rhodesia as she does in England, and the Breeders' Tables enable a breeder to see at a glance when his animals are due to give birth. A new feature of the Breeders' Tables is a Service Record, where the farmer can keep a complete record of all matings.

The "Copy of Income Tax Return" for the information for which space is provided is substantially the same as that required for a Rhodesian return. The Field Records, Accounts and Personal Data sections are all useful, wherever one may happen to live.

Other sections which have been included again this year are "The Pedigree Year in Pictures" and the Reference Section, (greatly enlarged). Last year, this writer used the Desk Diary throughout the year, and found it a great asset. This year, he heard the binding was to be different and was immediately concerned as to whether the book when open, would lie flat. He need not have worried. The new binding is stronger and more secure, and it still opens as perfectly as before.

The publishers describe this book as "the complete book for every farmer"; that claim is perfectly justified.

Published by Farmer and Stock-Breeder Publications, Dorset House, Stamford Street, London, S.E.1. Price 10s. 2d. Post 1s. 9d.

ALUMINIUM FOR OVERHEAD LINES ON THE FARM

By J. G. NEVILLE

WITH the continuing high price of copper conductors many farmers are looking for an alternative.

One is now ready to hand in the form of aluminium, as several firms are stocking standard sizes suitable for use on the farm.

Before dealing with the technicalities of the use of this conductor it is interesting to note that there is first of all an overall weight saving of just over 25 percent.

The equivalent aluminium conductor has the same current carrying capacities as copper and the overall price saving is approximately 40 percent.

Different Technique

There is no difference in the number of poles or insulators required, but the technique of handling aluminium is different to that of copper, and considerable care must be exercised in its use.

In the first place the aluminium at present on offer is steel cored with aluminium strands surrounding the core.

The steel core is purely for strength.

The aluminium strands are very soft and consequently care should be taken not to draw it out over rough stoney ground, otherwise the strands will become badly scored and scratched or even broken.

Special Clamp Required

The standard type of draw-vice used for copper conductors, and fencing wires, is not suitable as the jaws grip the conductor too tightly and incline to kink the conductors slightly, which with aluminium results in broken strands.

A special clamp known as the "Come-along" clamp is suitable and although it costs £4 10s. its life is almost indefinite and other uses can be found for this tool.

There is also another type of proprietary tensioning device available which has numerous other uses selling at approximately £5 f.o.r. Salisbury.



Shows standard clamp for aluminium with copper conductor encased in aluminium tube and connected to same clamp.



Aluminium conductor gripped by "come-along" clamp.

Continuing with the care of the aluminium conductor, wherever it is bound to an insulator or made-off at a termination point the conductor surface that will bear on the insulator should be first bound round with aluminium tape.

Finally in securing the conductor to the insulator aluminium binding wire must be used and not copper wire.

Precautions

There is a further important factor to remember in using this conductor and that is that copper and aluminium in close proximity such as in a clamp or line tap will, without precaution, set up electrolytic action.

This action ultimately leads to the breaking of the conductor, or at least overheating and shorts.

The jointing of this conductor must therefore be carried out with special clamps known as the parallel grooved clamps. This clamp as purchased is quite satisfactory for use with aluminium to aluminium, but the normal copper

line taps and clamps must not be used.

Where a connection is to be made from aluminium to copper, such as V.I.R. leads, underground cables and suchlike, the same clamp is used, but the copper conductor is first smeared with a special grease to keep the air from it, and then inserted in a small aluminium tube. This tube surrounding the copper conductor is then gripped in the clamp.

It is sometimes possible to obtain special clamps, one side of which is for aluminium and the other for copper.

Where it is necessary to use an insulated conductor, insulated aluminium is available, and this is dealt with in exactly the same way as with bare conductors.

Whilst the above precautions may sound a little onerous they are extremely important, and make all the difference between a first class job that will last for years and one that can give endless trouble.

(Continued on page 21)



"... I'm not complaining about the weather this week, old boy --- transport's my problem!"

"That's no problem --- ring Elcombe's! They'll shift anything --- anywhere!"

GEORGE ELCOMBE
(PRIVATE) LIMITED
Railway Avenue, Salisbury P.O. Box 166
Telephone 20443

Oh! My Poor TYRES!



THE illustrations on this page are reproduced from an amusing but instructive little book called "How the Innocent Suffer," published by The Natural Rubber Development Board, 758/760, Stuttafords Building, St. George's Street, Cape Town.

The book contains a number of cartoons illustrating a series of "Don'ts," and is designed to advise farmers on tyre maintenance. Those reproduced here tell us:

Top left—Put water in your tyres for increased traction and pull. Water can be used instead of wheel weights to reduce slip and give better traction and less wear on land.

Top right—When your tractor is not in use for long periods, don't leave it standing on its tyres . . . JACK IT UP. Failure to take this precaution results in deformation of the tyre casing, and irregular tread wear will occur when the tractor is put back into service.

Bottom left—Don't speed on the roads. Speeding on the roads and fierce acceleration and braking increase tread wear. As rubber is a poor conductor of heat, excessive speed makes the tyres heat up through internal friction and flexing.

Bottom centre—Don't leave your tractor idle in the sun. The direct rays of the sun are harmful to rubber. If you cannot leave your tractor in the shade, cover the tyres with sacking.

Bottom Right—Don't under-inflate. Under-inflation causes unnecessary stress and strain on the cord fabric. When tyres are under-inflated, tyre creep on the rim is likely to take place, resulting in tube failure, and grit and stones can work between the rim and bead. There is excessive deflection of the tyre, and when run on hard roads the wear is rapid.

Other cartoons in the book illustrate that untended cuts in tyres can result in water or acid from farmyard manure penetrating and damaging the tyre casing, that correct inflation saves money and that spilt oil is injurious to rubber.

Rhodesians We Ride



ALUMINIUM FOR OVERHEAD LINES ON THE FARM

(Continued from page 19)

Summary

To summarise the points of major importance:

1. Treat aluminium with care and do not use a draw-vice on it.
2. Protect conductor with aluminium tape and bind-in with aluminium binding wire.
3. Use proper clamps for aluminium and avoid direct contact with copper conductors.
4. A first class job done once

is cheaper than a poor job continually repaired.

The four main conductor sizes available are:

6/1,0661 = No. 10 S.W.G. copper equivalent.

6/1,083 = No. 8 S.W.G. copper equivalent.

6/1,110 = .035 sq. in. copper equivalent.

6/1,132 = .05 sq. in. copper equivalent.

To give some idea of the difference in weight compared with copper, No. 5 S.W.G. copper weighs 718lb. per mile, whereas equivalent aluminium conductor weighs 528lb.

The conductor is sold on drums

in lengths which will vary from 1,000 yards to 2,000 yards.

The insulated aluminium is sold in 100 yard coils.

Aluminium tape costs 5s. 6d. per pound and binding wire 5s. per pound. 1,000 feet of binding wire weighs 24lb. and 1,000 feet of tape weighs 18lb.

Numerous farmers have already used this type of conductor and appear to be entirely satisfied with the results and gratified at the saving in capital cost.

Wiring contractors are now using it, and it is therefore always advisable to obtain alternative quotations.

MORE ABOUT "FINISH"

I WAS very interested to read what Messrs. Lashbrook and Worthington had to say about "finish" in your issues of 23rd November and 21st December. In private conversation with Mr. Worthington, I gathered that there was not any detailed published work in the Federation concerned with the influence of rearing and feeding upon carcass measurements, but that such information has not been published does not mean that it does not exist. Could you not find out if anything is available?

Writing in the "Onderstepoort Journal" of April 1939, Volume 12 No. 2, Dr. Hirzel states that our knowledge of the cause of tough meat is incomplete. He mentions the instances of a research worker who found calves' meat tougher than that of older animals.

As regards the meat of fattened animals being more tender than lean meat, he states: "It is possible that with the laying down of fat in the connective tissue, the collagen fibres are forced apart and split up, so becoming more pliable on mastication. This would offset the effect of toughness caused by increase of connective tissue with age. But evidence on texture and connective tissue, their interrelation and the effect on toughness of meat is still scarce and inconclusive."

In this lengthy technical article Dr. Hirzel gives a long discussion on factors influencing the texture and tenderness of meat and points out that tenderness of meat is greatly improved by conditioning or ripening.

As applied to animals over two and a half years, Mr. Worthington has a point in his statement, "that by eliminating the extra finish we would also risk eliminating tenderness in the joint." Mr. Lashbrook's statement "that the feeder pays heavily to put this extra high finish on his beast" is also true of beef production elsewhere. Professor Cooper in Britain states "certainly farmers will have to consider seriously the wisdom of producing really prime animals when the last increments require up to four pounds of starch equivalent per pound of live weight increase, because

mainly pure fat is being laid down." He also adds, "it is possible, contrary to the scale of grading adopted by the British Ministry of Food, that a leaner type animal, provided it has the desired carcass proportions, will achieve a premium over a very fat animal."

The current work of Brookes and Vincent at Cambridge suggests that the cattle men could meet the demands of the butcher by rearing the calf for its first eight months on high feeding and then carrying the beef forward on an adequate diet without check until two and a half years old. How this can be done profitably under Rhodesian conditions I leave to Rhodesian cattlemen.

A. G. DAVIS,
Professor of Agriculture,
University College of
Rhodesia and Nyasaland.

RHODESIA'S BEST BEEF SOLD AT G.A.Q. PRICES

IN your issue of the 21st December, a paragraph appears under the heading of "C.S.C. and High Grade Meat". It states that almost 50 percent of the meat trade in Bulawayo is in the hands of butchers who do not deal with the C.S.C.

During a certain period not mentioned, it states that the C.S.C. killed 36 Rhodesia's Best and 6 Imperial against the butchers' one Imperial. I have taken the following figures from "The Rhodesian Farmer" during the month of November:

| C.S.C. | Lower |
|--------------------------------|-------|
| R.B. Imp. Grade A G.A.Q. Grds. | |
| 74 48 518 1,784 1,484 | |
| Bulawayo Other Butchers | |
| 12 33 107 220 351 | |

As Chairman of the Midlands Butchers' Association and certainly someone very interested in all sides of production and distribution, I hope the above figures will prove that the article in your issue of the 21st December was bad information and not likely to help anyone.

Readers may wonder why I have given this letter the above heading.

How many farmers know that Rhodesia's Best beef is sold at

POST

135s. per 100lb., which is only a G.A.Q. price, from the C.S.C. to butchers who deal with them. Butchers dealing direct with producers must pay at least 170s. per 100lb. for Rhodesia's Best. Unfortunately for producers of Rhodesia's Best the trade cannot pay 170s. whether they be Cold Storage butchers or open market butchers.

It is quite clear from the November killings in Bulawayo that the butchers who do not deal with the C.S.C. are most certainly supplying the public with good meat. There is a great future ahead for the cattle producer. True facts and co-operation will get us somewhere.

JIMMY BEATTIE.

Gatooma.

R.N.F.U. REORGANIZATION

IT is gratifying to note that Mr. Moffat agrees with my main contention that the R.N.F.U. house needs putting in order. My suggestions for reforms were merely tentative and did not pretend to be carefully considered palliatives. However, I do feel that Mr. Moffat's objections to them are ill founded.

Firstly, I do not agree that it would be an insuperable difficulty to arrange the election of Association delegates on more democratic lines. It need only be necessary for the secretary to notify all farmers in the area when an election for officers was to take place.

Secondly, Branches should most definitely not have the right to appoint officers who are not representatives of an association. The whole system becomes farcical when a branch appoints a delegate to Council who has not the confidence of his association. The danger of a member being excluded for parochial reasons by his association is far less than the appointment to higher office of an individual who is only personally popular with Branch.

Thirdly, the system of voting by show of hands reproduces

BOX

the worst feature of British Trades Unionism and should be made illegal before it is too late, and we find that the running of R.N.F.U. is in the hands of a vociferous minority.

We now have an able and far-sighted President and it seems the opportune moment for spring cleaning.

"DEMOS".

Lancaster.

FENCING

WHEN I read Mr. Louren's article on fencing with high strain steel wire I at once recognised the fact that he knew what he was talking about, and that many farmers in the Rhodesias would benefit a lot by adopting his principle of fencing, especially their boundary fences. Such fences have proved to be the best on hundreds of ranches on the Northern Transvaal/Bechuanaland borders. For the benefit of other Rhodesian farmers, I must ridicule Mr. G. H. Nutting's idea of fencing—I certainly would not recommend his way of fencing to anybody. He says: "for a fence after a year or two sags and loosens". Does he perhaps mean an Australian fence, for rabbits and Kangaroos?

Because a fence of high strain steel wire erected properly will not stretch—in fact it cannot stretch and obviously will not sag. To conclude, I will strongly recommend Mr. Louren's way of fencing.

D. W. VILJOEN.

Lusaka.

INFORMATION ON POULTRY

AS a farmer's wife who knows nothing about poultry at all, I would like to start with turkeys and other birds, but do not know how to set about it. I do not want to sell day-old chicks, just the eggs and dressed birds.

Could you please advise me where I can buy a book which will tell me all I want to know about the breeding, handling, housing, feeding of poultry, and

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which covers their pests and ailments in Southern Rhodesia?

Is there any sort of correspondence course available from an agricultural college?

(Mrs.) N. G. ROSSOUW.
Fort Victoria.

It is possible that Gwebi College will hold a short course—one or two days—in September, 1957, which would have to be attended in person.

The Chief Poultry Officer recommends "Poultry Opportunities in Southern Africa", price 7s. 6d. by Frank Rivers, a Rhodesian poultry farmer.

The following Government Bulletins are obtainable from the Publications Department, P.O. Box 8062, Salisbury, and are priced at 6d. unless otherwise stated.

- 1258 Prevention of Disease in Poultry, by G. H. Cooper.
- 1289 Vicious Habits in Poultry, by the Poultry Branch.
- 1312 The Rearing and Fattening of Table Poultry, by H. G. Wheeldon.
- 1329 Cheap Portable Colony

House for Poultry, by G. H. Cooper.

1339 Modern Culling of Laying Hens, by G. H. Cooper.

1390 The Artificial Incubation, Brooding and Rearing of Chickens, by H. G. Wheeldon (1s.).

1394 The Moulting, by H. G. Wheeldon.

1423 Control of Poultry Parasites, by A. A. Reed.

1431 Breeding of Poultry for Economic Qualities, by A. A. Reed (1s.).

1452 Management of Young Poultry Stock, by G. H. Cooper.

1465 Feeds for Poultry and How to Use Them, by G. H. Cooper (1s.).

1467 The Turkey, by G. H. Cooper.

1476 Trap Nests, by The Poultry Branch (1s.).

1493 Housing and Feeding of Adult Poultry Stock, by H. G. Wheeldon (3s.). Plans only (1s.).

1699 The Deep Litter Yard System for the Laying Flock, by G. H. Cooper (1s.).

THE COMMON ROOT-KNOT NEMATODE

By GEORGE C. MARTIN,
Phytonematologist, R.T.A.

This is the 20th and final article by Mr. Martin, on his recent research work on the common root-knot nematode of tobacco and crop susceptibility.

The whole series will, in the near future, be available in pamphlet form from Rhodesian Farmer Publications, P.O. Box 1622, Salisbury.

IN assessing the value of the plants listed in the table for rotation with highly susceptible crops in lands heavily infested with common root-knot nematode of tobacco (*M. javanica*), several points should be borne in mind. Farmers will find that in most cases a compromise will have to be arrived at between desirability from the cultural aspect and possible root-knot nematode control value.

A crop may be resistant as a root-knot nematode host and highly desirable from a farming point of view, but there is not much sense in going ahead if it is difficult to sow or plant, is not vigorous and may therefore be smothered by weeds (many of which are root-knot nematode hosts) or presents problems of reaping or harvesting. On the other hand if a crop possesses all or most of the desirable features other than root-knot nematode host resistant qualities it may prove wise to reject it.

Since starting this series of articles the author has found that many farmers tend to concentrate too much in their root-knot nematode evaluation of a crop on total resistance as a host. We must face up to the fact that in most cases and for some time to come we will have to live with the parasite and think in terms of economic control rather than eradication.

When studying the table of results presented above, it is felt that with any given crop, if the maximum number of egg masses found in a single root system is

multiplied by the maximum number of eggs seen in a mass, a fair idea can be obtained of the possible number of eggs which could be produced on the roots of a single plant of that crop. If in addition, the time period for development to the egg producing female stage is brought into the picture together with the number of plants normally grown per acre, a reasonable comparison between crops can be arrived at for evaluation from the common root-knot nematode control angle.

Caution.

It should be remembered that a reasonably accurate assessment can be obtained with regard to the annual crops but that with the perennials the picture could be quite different after the first year. In certain instances it is thought possible that although during establishment a plant is physiologically capable of permitting root-knot nematode development to the egg producing female stage, it may not be so during the latter part of that period or later.

Not one of the plants studied is in any way comparable to a so called highly susceptible crop such as tobacco, a single plant of which can produce thousands of large well filled egg masses but the results obtained in this series of experiments do indicate why a root-knot nematode infestation in lands never seems to "die out" whatever the cropping system used. It must also be realised that whilst tobacco appears to be reasonably tolerant to a late heavy attack by the common root-knot nematode,

(Continued on page 26)

| PLANT SPECIES | | | SUITABILITY AS HOST | | | | | Pathological symptoms (roots) | REMARKS |
|------------------------------------|------------------------|------------------------------|--|---|---|--|---------------------------------|---|---|
| | | | Attractiveness Based on maximum number of parasites seen in a single root system | Rate of increase (approx.) from entered larva to egg producing female | Maximum number of egg masses seen in a single root system | Maximum number of eggs seen in a single mass | Average number of eggs per mass | | |
| Scientific Name | Name in common usage | Variety or Strain | | | | | | | |
| Arachis Nypogaeae | Peanut | Natal common | 50 | 55-60 | 13 | 400 | 146 | Some rot and root outline irregularity. | |
| | | Virgata Jumbo | 50 | 75-80 | 6 | 15 | 10 | No galls | |
| Avena sativa | Oat | E.S. | 157 | 28 | 36 | 500 | 300 | Small amount of rot—many swollen tips. Small galls produced | |
| Cenchrus ciliaris | Rhodesian Foxtail | Grasslands | 46 | 40-42 | 3 | 10 | 6 | Fair amount of tip rot, malformation and discoloration | Shedding of infected roots probably takes place |
| Chloris gayana | Giant Rhodes Grass | Grasslands | 5,030 | 35 | 150 | 500 | 300 | Nearly all root tips markedly swollen. Some rot | |
| Chloris gayana | Katambora Rhodes Grass | Grasslands | 2,028 | 45 | 4 | 30 | 17 | Small swellings and a small amount of rot present | All plants completely eaten by wild antelopes by 50 days so the experiment was not concluded but the information presented is considered reasonably comparative |
| Crotalaria juncea | Sunn hemp | | 732 | 70 | 135 | 350 | 36 | Some rot and root outline irregularity. No galls | It was considered that 500 further females would have been producing eggs before the plants died off |
| Crotalaria spectabilis | Showy Crotalaria | Early and late | 158 | 0 | 0 | 0 | 0 | Certain amount of rot and distortion | Fewer than 20 females were seen in the 1956 plants examined over a period of 150 days. Egg sacs were formed in a few instances but no eggs were deposited. A few empty eggs were seen inside females during the later examinations. |
| Cynodon plectostachyus | Star Grass | No. 2 | 2,500 | 29 | 346 | 250 | 50 | Considerable rot, discoloration and root tip swelling. No true galls | |
| Eragrostis curvula | Weeping Love Grass | Grasslands, Ermelo | 67 | 0 | 0 | 0 | 0 | Minute tip swellings and slight rot | Grown from nodes |
| Eragrostis curvula | Weeping Love Grass | Ermelo | 12 | 65-68 | 1 | 50 | | Minute tip swellings and slight rot | Grown from seed |
| Gossypium hirsutum | Upland Cotton | 9.L.34 | 190 | 53 | 20 | 400 | 137 | Slight rot and root outline irregularity. No galls | |
| Mucuna derringtoniana | Velvet Bean | Somerset | 1,288 | 45 | 202 | 552 | 152 | Extensive rot. Root outlines irregular. No galls | It is considered that many more females would have commenced egg production before the plants died off. |
| Panicum coloratum | Bambatsi Panicum | Grasslands, Makari-kariensis | 1,800 | 0 | 0 | 0 | 0 | Initially many root tips markedly swollen. Small amount of rot | Although no eggs were observed in this experiment the writer has previously found infections where a few egg masses were present |
| Pennisetum purpureum Napier Fodder | | Grasslands | 450 | 38 | 8 | 300 | 50 | Small number of minute swelling at root tips. Some rot present | |
| Pennisetum typhoides | Munga | | 163 | 28 | 12 | 200 | 100 | Initially a fair amount of rot and discoloration. Root tips swollen | Forty days after sowing of seed the infection declined and thereafter very few parasites were seen in the roots |
| Setaria sp. | Ngamiland Setaria | Grasslands | 69 | 40-42 | 11 | 30 | 12 | Fair amount of rot, root tip swellings and discoloration | The infection eventually (97 days) practically died out |
| Setaria sphacelata | Kazungula Setaria | Grasslands | 452 | 21-24 | 335 | 400 | 45 | Fair amount of discoloration. Many small swellings of root tips. Some rot present | Although the infection built up strongly and quickly, the number of egg masses present after 102 days was well below that expected |
| Triticum vulgare | Wheat | Kenya 341 | 204 | 25-28 | 12 | 500 | 300 | Many swellings, much rot and discoloration | A naked eye examination gave the impression that wheat is a better host than it was actually found to be |
| Zea mays | Maize, White Dent | L.H. | 350 | 28-30 | 7 | 15 | 7 | Fair amount of rot and swelling of tips | |
| Zea mays | Sweet Corn | Golden Cross Jantam | 616 | 30 | 125 | 300 | 150 | Many fair sized swellings and a little rot | |

THE NEW LIBRARY AT KUTSAGA



In addition to the new west wing of the buildings at Kutsaga, a library has been built in the central wing. Here, Mrs. Shrosbree, the librarian, is standing by one of the bookcases. These already contain some 2,400 books and 1,500 pamphlets dealing with tobacco and related subjects. It also receives about 245 periodicals each month. The library is open for use by anyone who wishes to study in it.

THE COMMON ROOT-KNOT NEMATODE

(Continued from page 24)

other crops such as wheat and oats and possibly maize and cotton appear to be somewhat intolerant and are thought to suffer accordingly. The author appreciates that the final evaluation of a crop from the farmer's point of view can only be obtained from a series of experiments wherein research work as described in this series of articles is combined with actual rotation trials over a period of years. The amount of work involved and the acute shortage of trained personnel is such that only one or two crops could be competently tackled at a time. The mass of new information yielded by the research described in this series of articles is, however, considered to more than justify the effort and expense involved and is regarded by the author as valuable for guidance in future work. At this stage it would appear advisable that we should revise our thinking and define the descriptive terms in common usage; with reference to the former point it is felt that in addition to cultural considerations and economic value to the farmer, a crop should be viewed from two different root-

knot nematode aspects. Firstly whether it is capable of permitting development of the parasites to the egg producing female stage and if so to what extent, and secondly the degree of attractiveness exhibited to larvae together with the effect if any on the plant. A plant may permit little or no development of the adult stages of the parasite but may be extremely attractive to the larvae and therefore suffer considerably from such an attack either directly or indirectly; on the other hand there may be only a light or moderate degree of attractiveness with little adverse effect on the plant but a high proportion of the invading larval parasites may reach maturity and reproduce thereby maintaining a possibly dangerous level of infestation in the soil.

The number of plants grown per acre will of course have an overwhelming influence in such a case; compare for instance the numbers of eggs capable of being produced by single plant specimens of cotton, peanuts, oats and wheat and then think in terms of the numbers of "new" larvae produced per acre by an average stand of each of those crops.

It is not intended that in view of the results of this series of

experiments, farmers should quickly or drastically alter or reverse their cropping systems, many will no doubt, as a result of their own experience over a number of years, disagree with certain points put forward in this series of articles. It is hoped, however, that many farmers will by now have acquired a better understanding of the problems involved and be able to plan more suitable crop rotations to suit their own particular needs or at least understand what is possibly happening with regard to root-knot nematode in their present rotations. To those who do not agree with certain of the "host suitability" findings published in this series I draw attention to the possibility of different species, sub-species or races of root-knot nematode being present.

It might be foolish, because of any result I have published, to alter a rotation which has in the past proved to be capable of keeping a root-knot nematode infestation at a very low level, on the other hand it might prove equally foolish to introduce into the rotation a crop which although desirable from many aspects, has not been thoroughly screened and approved by a competent nematologist from work actually carried out within the Federation.

D.M.B. NOTES

DURING November, 1956, 854,643 gallons of milk were received from producers. Receipts during November for the three preceding years were:

| Nov. | Gallons |
|------|---------|
| 1953 | 524,597 |
| 1954 | 683,113 |
| 1955 | 725,412 |

Supplies were in excess of whole milk requirements and during the month 232,542 gallons were manufactured into cheese and 57,469 gallons separated for butterfat, the resultant skim milk being sold to African institutions and African individuals.

The rise in cheese manufactured and the consequent strain which is placed on the available curing space is causing the Board some concern.

Skim milk sales to Africans show a steady month by month increase as it becomes known that the Board's dairies have skim milk available for sale.

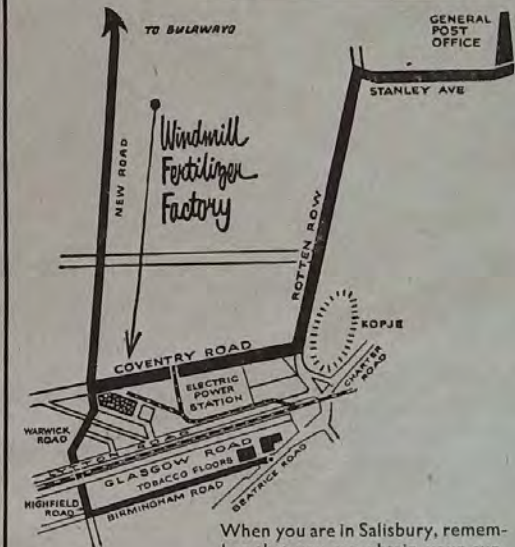
Plans have now been finalised to launch a Colony wide advertising campaign to increase sales of whole milk, skim milk and cheese. This campaign, which will commence in January, 1957, will be spread over six months and will include advertising in European and African periodicals and a filmlet to be shown in African townships in the main centres of the Colony.

The skim milk plant recently purchased from the Union is now being installed and it is hoped that it will be in operation at Gwelo Dairy early in the New Year. This plant, when working, should assist materially to handle surplus milk production.

During the past few weeks meetings have been held between duly authorised officials and Board Members regarding planning the new Salisbury Dairy and full scale planning will commence shortly.

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Down to Earth

By John Pile



The first of three parts of an article on Game and Tsetse, published with the approval of the Trypanosomiasis Committee

THE recent International Conference on Tsetse and Trypanosomiasis in Salisbury once again focussed public attention on the complexities of a subject which seems inseparable from a demand for the destruction of game animals, and many people to whom this connection is deplorable were disappointed that nothing emerged from the delegates' deliberations to show that game elimination need play no part in future campaigns against tsetse. The public are puzzled about this, and the understandable prejudices and feelings which are aroused lead to a good deal of needless argument. This article is an attempt to explain in few words the relationship of trypanosomiasis to tsetse, and of both of these to game.

Trypanosomiasis is a disease of man and animals due to the presence in the body tissues of a single-celled parasite called a trypanosome. This is comparatively large; much larger than a red corpuscle, and therefore easily recognized under a microscope. The parasite is transmitted from one mammalian host to another by a fly, two or three times the size of a house fly, called a tsetse, and the disease can only be controlled satisfactorily if all the tsetse in the neighbourhood are exterminated; and this insect extermination is very difficult where game are allowed to remain.

Several Species of Trypanosomes

This is an over-simplified statement of the problem. To begin with there is not just one species of trypanosome; nor just one disease that in man is called sleeping-sickness, and in animals is called nagana. There are more than half-a-dozen different species of trypanosomes, of which we may reckon that two can cause both sleeping sickness and nagana,

whereas four or five can cause nagana but are quite harmless to man. To take a jump ahead: this explains why tsetse-flies wherever they are found cause disease of animals, because some of them are bound to harbour animal trypanosomes, whereas only when the human trypanosomes are also present—and throughout most parts of Africa they are much rarer and more localised than the purely animal trypanosomes—is there any danger to man from the bite of a tsetse.

With regard to the disease itself sleeping sickness gets its name from the lethargy produced by the trypanosomes' direct attack on the nervous system, usually after much damage has already been done to other tissues. It is a most serious disease, and usually fatal if not treated. Fortunately if diagnosed early there are now several drugs by which it can be cured effectively. The disease of animals is equally serious and takes many forms. Nervous involvement is rare, but emaciation and weakness resulting from extreme anaemia are the rule. Clinically there is little difference between the usual symptoms of nagana and those due to gross undernourishment, as at the end of a long dry season, or to the heavy worm infestation to which sheep and even young cattle are prone. Thus a microscope is needed before it can be said definitely that an animal has nagana. Drug treatment is effective if commenced early and if there is no reinfection. In the presence of tsetse, reinfection is probable or certain depending on the concentration of flies; it is therefore of little use to continually inject animals with expensive and rather toxic drugs if tsetse continue to occur in the neighbourhood. Sooner or later in the presence of tsetse all large stock will disappear; only

a few goats and dogs (and sometimes not even these) together with poultry—which are not affected—being left.

Destruction of Domestic Animals

It is a sad experience to watch this destruction of domestic animals, often on a very large scale, and it seems strange that those who write feelingly about the cruelty of game destruction rarely spare a thought for the greater cruelty of emaciated fly-struck cattle being allowed to drag their weary way across the veld until they give up; to die ultimately from exhaustion and thirst, if they are not first pulled to pieces by hyaenas.

The rather difficult nomenclature of our subject is explained by the words' derivations. The word trypanosome is the English name of the group of parasites whose scientific name, *Trypanosoma*, is derived from two Greek words meaning augur-like body, and was coined to express the boring motion of the living parasite when seen under a microscope. The disease caused by trypanosomes is *Trypanosomiasis*, which in Africa is popularly called Sleeping Sickness when it affects man, or Nagana (a Zulu word) when it affects animals. The insect host and vector has the popular name of tsetse, derived from the Secuana language and suggestive of the buzzing sound made by the fly. The scientific name for tsetse is *Glossina*.

There are twenty-two species of tsetse-flies, of which only two are common in the Federation. These are *Glossina morsitans* and *G. pallidipes*. These two are so similar in appearance that only an expert can distinguish between them. Each is a brown fly, about 1 cm. long and easily recognized when at

(Continued on page 30)

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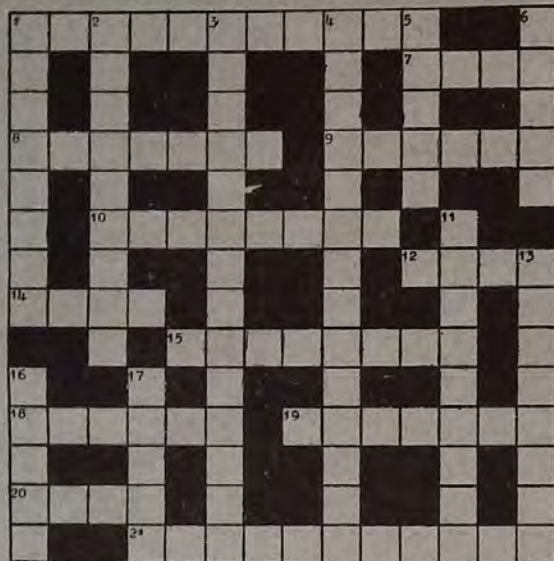
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Down: 1. Page; 2. Ivory; 3. Aside; 4. Eggs; 5. Picket; 6. Excuses; 7. Near; 12. Red; 13. Spot; 15. Asp; 17. Rows; 18. Dye; 20. Leopard; 21. Ale; 22. Sonney; 23. Tenet; 26. Peach; 27. Spud; 29. Blow; 30. Seet.

DOWN TO EARTH

(Continued from page 28)

rest by the way the wings lie closed flat over one another down the back, and by the way the proboscis projects horizontally in front of the head. The Latin word for tongue is *glossa*, and it was on account of the tongue-like appearance of the proboscis that the name *Glossina* was coined.

Tsetse-flies are remarkable for their breeding habits. The female does not lay eggs but extrudes a fully grown larva. This burrows quickly to a position just below the surface of the soil and immediately pupates. After a varying period, usually four or five weeks, the fly emerges from the pupa case, and only three or four weeks later the emerged female is ready to deposit her own first

larva. Successive single larvae are deposited at intervals of about ten days. The average length of life of a tsetse is only three or four months, so one female deposits only half-a-dozen larvae. This would be a slow rate of multiplication if pupal mortality was high; but it isn't; the female tsetse chooses her breeding sites so successfully that only a minority of pupae fall victims to predators or parasites, and very large tsetse populations can be built up when general conditions for the fly's survival are good.

These conditions include a range of temperatures that is not too severe, protection from much direct sunlight, and adequacy of food. The sole food of both sexes of tsetse is blood. Given warmth, adequate shade and

abundance of food, tsetse can thrive, and in Rhodesia these conditions pertain throughout much of the wilder parts of the Zambesi Valley, where tsetse are very numerous. Many parts of Rhodesia are too cold for tsetse; even Hartley would be just too cold in some years.

The economic importance of tsetse is due almost entirely to the fact that they are the insect hosts of trypanosomes, and when an infected tsetse bites an animal to get blood it inoculates this animal with large numbers of trypanosomes, which may find this host a suitable one for further multiplication, to the extent of causing disease which varies from trivial to fatal.

To be continued next week in "Down to Earth".

Across

1. We owe him a great deal (4, 7).
7. With all it makes a picture (4).
8. Hurries (7).
9. Negotiations (6).
10. Was the Bishops letter written by Neville Shute? (8).
12. The unhappy utterance has gone into reverse (4).
14. Often connected with lip (4).
15. Rugger Captains' instruction (4, 5).
18. To free from harshness (6).
19. Vets ran (7).
20. She came from "Green Gables" (4).
24. Once rung for the dying (11).

Down

1. In spite of their beginning they carry heavy goods (8).
2. No true Hungarian could now be this (9).
3. Quality of pleasing (14).
4. "God that madest Darkness and light"—Heber and Whateley (5, 3, 6).
5. Diplomatic communications (5).
6. Greatly feared gangs (5).
11. Musical portion of vehicle? (9).
13. This is set fore-and-aft 1, 7).
16. An attempt (5).
17. According to legend tobacco growers work here (5).

NOTES ON HANDLING STOCK

By "STOCKWHIP"

TURNING over the pages of a South African journal devoted to farming I saw an enquiry by a Southern Rhodesian, asking how to throw an ox. A vet. had replied showing an ox ready for throwing, with either three, or four half hitches round him. No doubt his method had some good points, the trouble would be to get an ox, or a cow, sufficiently peaceful to wait until one put the half hitches on it.

In a properly constructed yard, and one should not attempt to handle big stock without one, either as an adjunct to dipping or for ordinary cattle work, several hide ropes are essential, say two long ones 25 or 30 feet long, and some short ones about 12 feet. A wild, or troublesome beast, can be put in the yard, roped over the head with the long rope, his near fore and near hind foot roped at the fetlock, if he is to fall off side up, and the ropes taken round posts to the front and rear, will cause the beast to fall. Naturally the head rope is released, before the animal falls. If the head is lifted, and the jaw turned upward, the beast has to remain still. When releasing, the ropes on fore and hind feet are loosened, and slipped off quickly. Natives, or white men, must be smart dealing with any livestock, there is no place for the sluggard.

Making Hide Ropes

To make good hide ropes of four, five or six or more plaits is a skilled job, but it is not difficult to teach a Native to make a four-strand rope if one first practises with four strands of tape. It will not be a neat rope, but if made of a hide that has been taken off carefully, it will hold nearly any horse, or ox, if head roped. A hide should be taken off a beast carefully, cautioning the skinner to slice off the outer skin of the beast, and leave the meat on the hide, rather than gash the hide. Then the hide should be pegged down in a shed, on a level floor and pegged strongly so that the pegs will not draw out. Plenty of salt should be sprinkled

on, and when quite dry, it should be trimmed as nearly possible circular.

Leave it on damp ground, or bury it in damp ground, until it becomes soft, and pliable—one night generally will suffice, and then with a saddler's gauge, if one can be had, or a knife, start and cut one long strand, a half-inch wide, or three-quarters if the hide is thin. When the hide is finished you will have one long strand, which can be looped over a limb, as for making reims, and after being well greased and worked can be taken down and worked into a rope.

Another method is to cut off a slice of the hide, two inches wide, and split it into four strands, leaving about six inches undivided. This can be cut with a knife crosswise and the four loose ends taken through an iron ring, an inch and a half in diameter, thereby saving the trouble of splicing a ring on to the divided ends. When it comes to making the rope, take the four ends through a 1½ iron ring and work six inches of the overlapping strands into the rope end, then show a Native (or two Natives is better) what you need, and if the ropes are cut into equal lengths, and rolled up most of those who have worked with reeds will turn out a strong and durable rope, which should be kept well greased and kept out of the wet, except when using it in a wet yard.

Before commencing work the hair should be shaved off with a sharp knife, or the hide can be covered with lime, and buried until the hair will come out freely. For a few cattle the hair does not matter much, but it is ugly.

For Horses and Big Cattle

In falling horses or big cattle, long ropes should be used. The beast should be roped, and in a second rope, about the middle, should be tied a loop, about 30 inches long. This is slipped over the rope holding the beast and

worked along it over the animal's head. The two loose ends are taken through the forelegs and hind legs, taken round both fetlocks, and then through the sides of the loop, hanging round the beast's neck. If the head rope is held and the beast kept straight, a Native pulling on either side, will bring forward the animal's hind legs until it literally sits down quietly. It can then be attended to and when finished with the ropes are loosened and the noose pulled over the head, and then the head rope is pulled off. Naturally, celerity is essential in this, as in all things connected with stock.

Commodities From The Fifth Quarter

One can of course use sash cord or other rope for these jobs, fitted with rings, but they are not nearly as strong as a rule, and a hide rope will stretch a long way before it breaks. Further, if one can teach a couple of intelligent Natives to make decent ropes, they are invaluable for other jobs, and do not cost much. That probably accounts for their use in the Australian bush, where in the old days, cattle men had to make their own ropes, boil up bones, and make their own neatsfoot oil, which being untreated is better for saddlery and harness than bought stuff. They made in addition, their own junket from the stomach of a calf, whilst the women turned out jelly and glue from cow heel. Halters were of greenhide doubled, and in thick country bull skin leggings covered the leg up to the thigh, and leather gauntlets the hands and arms to protect men when galloping through scrub. Hobbles for horses were made of hide doubled, a slit one side and a half-inch piece of hardwood the other. Soap was made of tallow and lye from wood ash by pouring water over woodashes and skimming off the water. Slow and troublesome, but "needs must when the devil drives."

(continued on page 33)

Spray with Coppesan*

... for trouble-free crops

Coppesan contains 45.5% copper (as an oxychloride) with a sticker and spreader. It is a wettable powder and when diluted with water is ready for use in high or low volume spraying machines. Coppesan has exceptional adhesive properties on the foliage.

Coppesan controls Potato Late Blight and Tobacco Angular Leaf Spot, Tobacco Frog Eye and Tobacco Wild Fire. Coppesan is safe—and effective.

* DOES NOT CONTAIN ARSENIC

MADE BY  ENGLAND

R. F. OAKLEY & CO. (PVT) LIMITED, P.O. BOX 438, SALISBURY



POTATOES



TOBACCO

NOTES ON HANDLING STOCK

(continued from page 31)

The Round Yard in Australia

Nearly all the big places, in fact most cattle places, had as an adjunct to the branding and tailing yards a round yard, about ten feet high, strongly built, with several gates leading into different yards. This was about 18 feet in diameter and was used for drafting cattle. The gates were operated by a man sitting above the yard, whilst another below drafted off the cattle, stick in hand, calling out, "Cow, weaners, bullocks," etc. Naturally the man doing the drafting had to be slick, for a bush cow is by no means slow if she charges and has to be stopped with a stick.

A second use of the round yard, was for breaking horses. One horsetamer used to undertake to catch and bridle any horse brought to him within half a minute, and he did. His contention was that nine out of ten bush horses were merely frightened, would gallop round the yard until dizzy, and once one could get a stick on them or one's hands, they would stop, and it is a fact. They were not all frightened ones, outlaws were brought to him, which would charge open-mouthed, or with both feet striking, but Mac-Gillivray, six foot three, turned them with a short piece of stick and rubbed them down and then bridled and saddled them. Broken in? No, but at one camp receiving horses for the war on the Japanese they had five or more rough riders. The horses were caught, in a crush if necessary, and saddled, then blindfolded, and led out. On climbed the rough rider, the eye bandage was removed, the gates were thrown open, and out went horse and man like a tornado. "Passed," said the military representative, and so it was.

Buyers for the Indian Army were much more critical, and Jones, with a hundred horses, had a bay horse injured in the forelegs. He ran in three, and the buyer passed them, he ran in three more, with the injured one, and the buyer took the two good ones. Another dozen or so, and then Jones sent in four, and the injured one. Again the buyer yelled

"Bush", and sent out the injured one and another. More horses, and this time Jones sent in the two injured ones and two sound ones. The buyer drafted out the two good ones, then he yelled out, "Bush, and send your old granny in with them next time and see if I'll recognise her." Jones desisted.

A twitch is very useful dealing with minor ailments on horses. A 12-inch hardwood stick bored with a small hole and a piece of leather or strong bootlace to twitch round a horse's nostril enables one to attend to sores and so on without throwing the horse. Hobbles are also very useful. One can often keep a horse quiet by holding one ear tightly—a horse does nothing without moving his ears. Also one can get off a horse, which cow-kicks when its rider is getting off, by reaching forward, getting hold of both ears, and vaulting over its head.

A good crush with a heavy wooden cap over the top is essential for either a hundred cattle, or a thousand, and a bad one is anathema and causes loss in calves through cows turning, and all sorts of minor and major injury.

POUNDS AND TRESPASS ACT

THE scales of charges laid down in the Schedules of the Pounds and Trespas Act have been altered to bring them into line with present day costs, in accordance with a resolution passed at the 1953 Congress of the R.N.F.U.

The new charges are:
First Schedule

(Tariff of charges for dressing and dipping)

| | per head | s. d. |
|---|----------|-------|
| Dressing Equines for Scabies | Nil | |
| Dipping cattle over six months old | 0 3 | |
| Dipping cattle six months old and under | 0 2 | |
| Dipping Sheep | 0 1 | |

Second Schedule
(Mileage Fees payable to persons delivering animals to be impounded)

| | per mile | s. d. |
|-------------------------------------|----------|-------|
| For all stock not exceeding 20 head | 1 6 | |

For all stock exceeding 20 head, but only when two or more herds are used 2 3
For all stock exceeding 100 head, but only when 3 or more herds are used — 3 0

Fifth Schedule

(Assessors' Fees—damage to property by animals)

For each day — — — £1

N.R. ENTOMOLOGIST TO ATTEND INTERNATIONAL CONFERENCE IN SALISBURY

DR. K. F. SALMOND, B.Sc., D.I.C., Ph.D., an entomologist seconded to the Northern Rhodesia Department of Agriculture from the Colonial Research Service, will represent Northern Rhodesia at the International Conference in Salisbury this month, according to a statement issued by the Department of Agriculture.

The conference, which has been called by the Committee for Africa South of the Sahara, will be on "Stored Food Products" and will be attended by specialists from a number of African territories, including Southern Rhodesia, Uganda, Sierra Leone and French West Africa. It will last from January 21st to 26th, and will be under the chairmanship of Dr. G. R. Bates, chief botanist and plant pathologist to the Department of Research and Specialist Services at Salisbury.

Dr. Salmond will, it is understood, deliver several papers she has prepared on stored food problems. She has already produced specialist papers on insect pests in relation to storage of food products.

CATTLE SLAUGHTERINGS

THE following figures have been issued by the Cold Storage Commission for slaughtering in Salisbury, Bulawayo, Fort Victoria and Umtali for the week ending 3rd January, 1957.

| | Rhod. Best | Imp. | Std. | G.A.Q. | Lower Grd. |
|-----------------------|------------|------|------|--------|------------|
| Sby. C.S.C. | 15 | 83 | 230 | 651 | |
| Sby. Other Butchers | — | — | — | 12 | 17 |
| Byo. C.S.C. | 11 | 267 | 552 | 177 | |
| Byo. Other Butchers | — | — | 24 | 85 | 80 |
| Fr. Victoria C.S.C. | — | — | 63 | 34 | 10 |
| Umtali C.S.C. | — | 4 | 31 | 46 | 27 |
| Umtali Other Butchers | — | — | — | 4 | 6 |

Tobacco Research – The Present Season

The third in this series on current research at the Tobacco Research Board's stations of Kutsaga and Trelawney.

ENTOMOLOGICAL EXPERIMENTS

A LARGE part of the work at present being carried out at Kutsaga under this head is on Rosette and the Aphids which transmit this virus. As Mr. J. Legge, the entomologist in charge of the work, said, "the first thing to do is to find out the best method of killing the Aphids. When a suitable control has been found, more time can be devoted to long term work which may eventually suggest ways of avoiding the disease".

In small scale experiments, regular spraying of seedlings with certain of the insecticides already being used to kill aphids has helped to prevent the spread of the disease. Preliminary work with Systemic insecticides has been encouraging, and this year attention will be concentrated on these.

Long Term Rosette Work

Some of the initial laboratory work has been done and field experiments are being started. One range of experiments studies the effects of various cultural practices, such as dates of planting on the behaviour of the Aphids.

Other experiments study the way in which the virus is transmitted under different conditions of growth, and the effects of varying numbers of Aphids.

So far, said Mr. Legge, only one type of Aphid is known to be concerned with the transmission of the virus, and one of these is able to infect a plant in the short time of a quarter of an hour.

Work is also being carried out to determine what winter hosts the Aphid uses, and to see if control would be feasible from this angle.

The Rosette work therefore falls into three parts, the behaviour of the Aphid, the relationship between the Aphid, the virus and the plant, and chemical control of the Aphid with insecticides.



Mr. J. Legge, the Entomologist at Kutsaga, examining his tobacco plants in his laboratory, which is in the newly completed wing. At present he is building up a stock of rosette'd plants for his field experiments.

Cutworms, Wireworms and Whitegrubs

A good measure of control of Wireworms and Whitegrubs can be effected by Aldrin or Chlordane in the planting water. If a pint or more of water is used it appears that some of the Cutworms are killed when the impregnated soil is pushed up against the plant stem when firming the soil. But to achieve complete control of Cutworms it is at present necessary to spray or pour insecticide on to the plants about five days after planting. This involves two operations, and the present range of experiments is designed to try and find a method of control which can be done in one operation.

Broadcasting the insecticide before ridging is being tried out, and a study is being made of the movement of insecticide in the soil following different methods

of application. Broadcasting of the insecticide alone and mixed with the fertilizer, banding it with the fertilizer, and putting it as dust and wettable powder in the planting hole.

As in the case of the Aphids, Mr. Legge is seeing how various cultural practices affect the behaviour of these pests, and whether the various current rotations encourage or discourage their build up.

Finally, the tobacco cured from some of his plots will be tested for residue and taint following different insecticide treatments.

The experiments described are all taking place in the field plots during the present season, but Mr. Legge mentioned that the behaviour of Aphids in the seed-beds was also being studied, experiments on the control of Cutworms in the beds having been concluded last season.

TOBACCO ITEMS

PUNITIVE U.S. ACTION AGAINST 139.

SPOKESMEN of the tobacco division of the U.S. Commodity Stabilisation Board said that the U.S. Government was going to make it unprofitable for farmers to grow anaemic or neutral type tobacco, commonly known as "139."

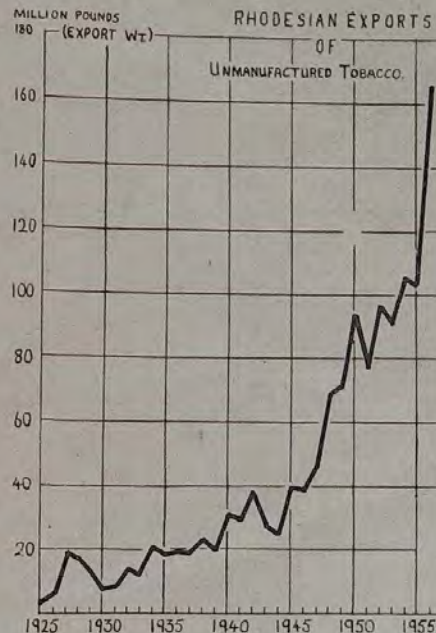
"Among the drastic steps that are to be taken," he said, "will be a further reduction in acreage allotment and a reduction in the Government support price."

He warned growers that continued production of this type of tobacco might cause them to lose their export markets and part of the domestic markets. He said that the farmer would suffer in the end, unless production of this type of tobacco is stopped. "We are going to have to reduce the quota and support price until it becomes unprofitable to grow it."

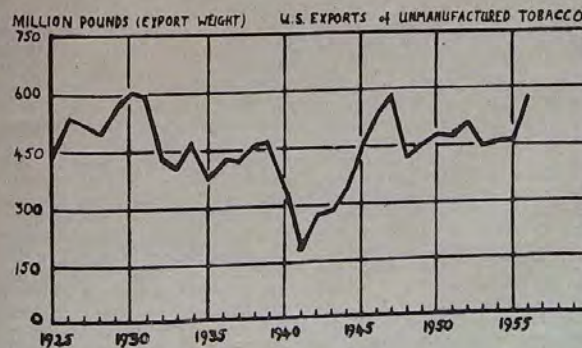
INDIAN TOBACCO DEALS

TOBACCO has been included in trade agreements which India has negotiated with East Germany, Chile and Austria.

PROGRESS!



STAGNATION!



U.S. TOBACCO SALES

SALES in the East and North Carolina market closed, the total tobacco sold being just over 507 million pounds, at an overall price of 44d. per lb., a drop of three farthings a lb. on last year's price but an increase in total crop of 20 million lbs. This larger crop has been produced from a smaller acreage so that the average yield now comes out at roughly 1,750lbs. to the acre.

The crop is said to have contained a very large proportion of nondescript and poor grade tobacco and about a quarter of it had to be taken up by the U.S. Government under the Loan and Price Support system.

The Middle Belt average for the sales just concluded was 44½d. per lb.

NEW CURING and HANDLING METHODS

Methods of handling tobacco have changed very little in the last century and the essential principles of curing still also follow rigidly conventional lines. Recent experiments in the United States, reported by BILL HUMPHRIES, a well-known tobacco writer in the Raleigh, North Carolina "News and Observer" indicate that revolutionary advances in both handling and curing may be in prospect in the next decade or so.

TESTS have been conducted by the North Carolina Experimental Station on curing tobacco in bulk, without the necessity of stringing it on sticks. Small circular chambers were used, about 4-ft. in diameter. Some 250lbs. of green tobacco, enough to fill 22 to 25 sticks in the United States, were placed in each chamber in an area of only twelve square feet. The leaves were turned with their butts all in the same direction and hot air was forced through the chamber with a fan. Curing required about as much time as with conventional methods. More time was needed for yellowing, but less for drying.

Results

The bulk-cured leaves looked very much like ordinary tobacco, except that the appearance was much more uniform and there was distinct difference in texture. The uniformity was due to the fact that more precise control can be maintained over maturing conditions because of the small area involved. It was also revealed that during yellowing the more mature leaves reached their optimum yellow state and then remain in that condition until the other leaves caught up.

Dr. F. J. Hassler of Northern Carolina State College's Department of Agricultural Engineering said: "Contrary to conventional methods, we found in bulk curing that tobacco could be left in the yellowing stage at a relatively low temperature, until all the leaves had yellowed uniformly. Then we could raise the heat sharply and abruptly to move into the drying stage.

The time at which we raised the

temperature seemed relatively unimportant. It was a much less critical matter than with conventional curing where the grower has to strike an average and do the best he can. Also, the abruptness of the increase in heat seemed to make no difference. We didn't have to raise it a few degrees at a time as would have to be done in a conventional barn."

Advantages

Bill Humphries, in reporting all this, suggests that there appeared to be definite possibilities of an automatic curing scheme being developed. He points out that the advantages of bulk curing are several:

Only about one-tenth as much space would be needed for curing. Small curing chambers might replace barns.

Precise control could be maintained.

Much less fuel would be needed for the compact units to be insulated efficiently. The heat would be in intimate contact with the leaf, and some of the heat resulting from the curing process could be re-circulated. Saving in fuel would amount to 50 to 75 per cent.

Curing units might be made flexible, to accommodate large or small quantities of tobacco.

The only disadvantages appear to be that forced ventilation would be necessary (this would come in useful for other crops) and that leaves all have to be placed in one way.

The difference in texture of the bulk cured tobacco is ascribed to the fact that leaves remained fanned out and didn't shrink dur-

ing the curing process. Therefore the leaves would not stretch after curing had been completed. This is a matter which will be investigated further.

Further Tests

There have as yet been no tests to determine how well bulk-cured tobacco would age, but samples have been offered to manufacturing companies for such tests. Samples will be analysed and smoking tests will also be carried out. The next steps to be taken by the experiment station are in fact to carry out an overall survey of the chemical and physical make-up of bulk-cured tobacco to find out whether it differs appreciably from conventional leaf and whether it can become an acceptable commercial product. At the same time experiments have been carried out to mechanise the harvesting of tobacco. A machine has been developed which uses rotating rubber fingers and other devices to remove the leaves from the plant.

It is claimed that improvements to mechanical harvesters have already been made to reduce leaf damage to the extent that is now not much worse than that which occurs with conventional harvesting.

There is a strong urge in the United States to lessen the drudgery involved in tobacco production. It has been pointed out that tobacco still requires more than 400 man-hours to the acre, much of the work of an unattractive character and that very little has been done compared with the progress in other industries to improve on the old and traditional methods employed in the tobacco industry.

PREVENTS CATTLE MESSING FEED

DETAIL of the hinged cover to the feed manger for kraal forage feeding, devised at the Vaalhartz Experiment Station. This type of manger prevents cattle from throwing hay all over the place as they normally do in feeding from a manger, and when the grid is raised is easily filled or cleaned.



(Photo: Dr. Charles Converse)

ROCKET JETS TO PROVIDE CROP DRIERS

THE same type of jet engine that powered German V-1 rockets in World War II is being tested for furthering agricultural progress in Iowa. Agricultural engineers at Iowa State College at Ames are experimenting with a small pulse jet engine, which measures about two feet in length, for use as a farm crop drier. The engineers say the high heat output and low mechanical requirements are major features of the jet engine that seem possible factors of efficient and economical use in reducing the moisture content of stored grains and forages. One problem still remaining to be overcome is that of economically creating the airflow required to propel the heat generated by the engine through the stored crop. (S.S.I.S.)

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Contact your Co-op. or the Head Office of this Company to obtain information and seed for immediate planting. By investing the minimum of £1 you can obtain a carton of seed sufficient to plant one acre. Also, obtainable in packings for larger acreages.

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The Rhodesian Farmer

P.O. BOX 1622, SALISBURY

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Advertisements for this section of "The Rhodesian Farmer" must be accompanied by a remittance to cover the cost of insertion in accordance with the tariff below:

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Add 1s. for postage of replies addressed to "The Rhodesian Farmer."

CASH WITH ORDER, PLEASE.

LATEST HOURS FOR RECEIPT OF ADVERTISEMENTS

Advertisements received by 10 a.m. on Monday will be included in the issue appearing on Friday of the same week, in the normal classified smalls pages, but advertisements received after 10 a.m. and up to 4.30 p.m. on Monday will be included under the heading "Too late for classification" on a page at our discretion. Advertisements received after these hours will be placed in the following week's issue.

PERSONAL

LONELY? Happy Friendship Bureau for Lonely People will introduce you to friends anywhere in South Africa. Rhodesians Hundreds of genuine letters of thanks. All age groups. Strictly confidential. Long established. Write Margaret Kennedy, P.O. Avondale, Salisbury. —TC104

WANTED KNOWN

FENCING Material—Barbed wire, imported 100 lbs. coll. 13½ g.s. f.o.r. Salisbury. Paint and Hardware Centre, Box 1668, Bulawayo. Tel. 2642. —TC83

NATIVE RATIONS—Obtain your meat or offal for Native Rations from us. Special Discount for Bulk Supplies. Standard Butchery (Pvt.) Ltd., Box 56, Bulawayo. Phone 2273 and 61355, Grey Street, Cor. 8th Avenue. —TC96

REQUIRED Immediately all grades of Slaughter Stock, small or large numbers. Top prices paid—Contact Alvin Botha, Box 56, Bulawayo. Phone 61355 and 2273, or call in at the Standard Butchery, Grey Street, 8th Avenue. —TC90

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TEMPORARY Manager required, period approximately March to November, 1957, on farm near Lusaka, N. Rhodesia. Jersey cattle, pigs, citrus. Opportunity for young man with technical and some practical knowledge to judge farming opportunities in N. Rhodesia—Apply Sharland Bros., Box 437, Lusaka. —877

WANTED, a practical farmer for a dairy farm in Northern Rhodesia. The man must be a worker, and have knowledge of diesel engines and to work a tractor, and keep it and farm implements in running order. Reply stating experience and salary required to R.F. 663, Box 1622, Salisbury. —663

SITUATIONS WANTED

YOUNG man seeks position as farm assistant in Rhodesia. At present employed at Allerton Veterinary Research Laboratory. Can offer experience—Write B. J. Pretorius, Box 405, Pietermaritzburg. —879

POULTRY FOR SALE

ACCEPTING Day-old Chick Orders. March to September, 1957. Prices per 100, unsexed: W. Leghorn, New Hampshire, R.I.R. and crossbreeds. B.A.-W.L. N.H.-W.L.: 28. B.A.: 28. 10s. Sexed pullets: W.L. B.A.-W.L. R.I.R.: 217 10s. B.A.: 218—Apply B. Schermbroeker, Bonnyvale Stud Farm, Box 402, Bulawayo. Telephone 0-0812 (Govt. B.W.D. and typhoid-free certificate held). —TC92

ACCEPTING orders for day-old chicks. April to September. Price per 100: White Leghorn and B.A. W.L. cross, sexed 217, unsexed 23. B.W.D. and typhoid free certificate. —Apply A. Habitzel, Box 681, Bulawayo. Mapani Poultry Farm. —TC103

PULLETS—B.A. x W.L. Three months 10s. Mature 20s. each, f.o.r. Bulawayo. Vaccinated against chicken pox with life time vaccine B.W.D. free certificate held. E. E. C. Green. Kloof Stud Poultry Farm, P.O. Box 879, Bulawayo. —TC93

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A FEW pure-bred Afrikaner Bulls 2 years old from £22 10s.; and 2 yearling pure-bred Afrikaner Bulls at £17 10s. and £20. P.O. Box 8103, Belmont, Bulawayo, or phone Bulawayo 621227. —872

AYSHIRES, Bulls available from good yielding hardy stock. —865

PIGS Book now. Wessex Saddlebacks pure, or in pig to Landrace back 3 gns. per month. Large white hogs from recently imported stock. MacIntyre, Waiwyn Farms Ltd. Shamva. —TC97

DARTNELL LARGE WHITES: Stock Book Wall Candidates 65th Supreme Champion Salisbury and Bulawayo Shows, 1956. Excellent selection fit for service Boars. Conolly Bros., Fletch. —868

HEREFORDS, In every country throughout the world, Herefords hold the field for beef production. Introduce this hardy breed into your ranch herds—For particulars write to the Secretaries, 76 Elm St. Newtown, Johannesburg. Box 7823. —TC9

PEDIGREE Swedish Landrace Glits for sale. Thirty-five guineas. P.O. Box 17, Marandellas. —878

PURE BRED and Pedigree Afrikaner Bulls. Apply Gilchrist & Cooksey Ltd., P.O. Box 715, Salisbury, or to Fortlet Estate, Sincla. —TC101

TWENTY-FIVE Afrikaner Angus Cross Heifers, 2½ years old. Heavy in calf to Afrikaner Bull. Also 25 Good Afrikaner Type Heifers. Contact Standard Butchery (Pvt.) Ltd., Grey Street, 8th Avenue, Bulawayo. Phones 2273, 61355. —863

KENNELS

BULL TERRIER, RIDGEBACK male pups—parents pedigree, £3 2s. N. Molr, Somabula. —876

FAMILY PET, guard, hunter, retriever, companion: you want an Afriale. Pups of both sexes, price by arrangement. Write Navaho Airdales, P.B. 3950, Umtali, S. Rhodesia. —862

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LYNDALE Bull Terrier Kennels. Puppies for sale. (Sire imported Gt. Britain 2nd Best on Show All Breeds Salisbury Show). Brindles, Whites, Black and White Mr. & Mrs. R. Holden, Woodville Estate, Bulawayo. —669

WANTED: Airedale Pups. Please write to E. P. Kruger, Snr., Sotl-Source, via Gwelo. —681

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BARN tiers, roofing timbers, builder's props and all your gum pole requirements. —Lewis Lumber Co. (Pvt.) Ltd., P.O. Box 61, Phone 21527 or 366583, Salisbury. —TC55

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BOILERS for the Tobacco Farmer and Industry. Reconditioned and new boilers for sale: (1) Davy Paxman Loco 60lb. pressure, 1,000lb. evaporation, £750. (2) Horizontal Boiler on wheels, 1,000lb. evaporation, £550. (3) Vertical Boiler, 800lb. evaporation, 75lb. pressure, £500. (4) Loco Boiler, 900lb. evaporation, £550. (5) Loco 100lb. pressure, 800lb. evaporation, £1,400. (6) Screens Vertical Multitubular, 5 years' guarantee, 50lb. pressure, £230. —Screens Ltd., Birmingham Road, Salisbury. —870

FERGUSON Petrol Tractor, good condition, with nearly new implements, 2-furrow plough, offset scolloped disc harrow, spring tyne cultivator, £500—Hall, Norton School Norton. —870

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PIPING, 3in. galvanised, 2in. Black B up to 2,000 feet, 3s. per foot. Box 495, Umtali. —864

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1956 FORD ANGLIA, as new, done 6,000 miles. Serviced every 500 miles and dustproofed. Owner driven. Price £480. o.n.o. No time limit. Owner bought larger car. Write Breerton, P.B. 205A, Salisbury, or Phone 366082. —668

1951 A.40, Running order. Four excellent tyres. £150 o.n.o. Write R.F. 667, Box 1622, Salisbury. —667

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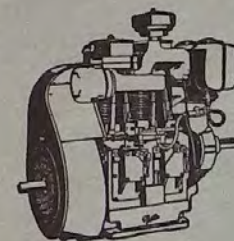
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FAMILY AFFAIRS

This interesting article by MAURICE MOYAL comes from France and he says

HERE'S A HEALTH UNTO YOUR ROSES

TWENTY percent of all rose cuttings sold the world over belong to those varieties created by Francis "Wizard of Rose" Meilland, the famed French hybridist, from Cap d'Antibes, on the Cote d'Azur. These "children" of his—Peace, Happiness, Sun King, Miami, and 84 other worthy varieties—are giving the thrills of beauty and discoveries to millions of rose-lovers the world over. He has won far more Gold Medals and Premier Awards in international rose shows than any other living rosarian.

Here are the valuable tips that the hybridist, who ought to know, has to offer you for building a health unto your roses. First, choose an airy exposure, far from encroaching tree roots. Give your beauties adequate spacing, so that they will have room to spread themselves in the course of their development. Grow them in a humusy medium soil, which may be even gritty.

Remember that plants breathe by their leaves AND roots. To insure the proper supply of oxygen to the latter, your soil must have adequate porosity. Although it should have water retention capacity, it should NEVER be soggy. Never lose sight of the fact that when air-spaces between roots get water-logged, this hampers capillary action, which sets plants growing.

Give your soil generous preparation a full month before actual planting, allowing it to settle down. Spread on the site a 3-inch-thick layer of horse—or cow manure—preferably sheep-manure if available—to the rate of 20lb. per square yard. A cupful of ground bonemeal per tree should prove beneficial, as it has a pH value of 5.4—roses thriving within the 5.5 to 6.5 range.

Allow manure to "weather in". For bush roses, dig a planting hole to a depth of two feet, and as much across, so that roots won't be crowded. An essential point overlooked by 99 gardeners out of a 100 is to turn the SOIL COMPLETELY UPSIDE DOWN, replacing the top-soil with the sub-soil. Bury your nice old kraal manure at a depth of one foot, beyond contact with the roots at first, but close enough for them to draw their sustenance as they grow.

Exceptionally long-lived ramblers and climbers require far more plant food and generous soil preparation than mere bush roses. Bury in the kraal-manure at a depth of one foot, to the tune of 50 percent more in a planting hole by a goodly foot wider and deeper. If you were unable to lay your hand upon kraal manure, chemicals would do, if bulked up with peatmoss. The recommended requirements are one part of Azote, 2.5 of phosphoric acid and 3.5 of potash.

Unpack at once your trees upon arrival. As you get such grafted and pruned for planting, you'd better remove only those parts injured in transit—and one inch at most. Cut with SHARP knife, then give a good dip in a weak solution of B.H.C. or good old nicotine to disinfect from overwintering eggs.

If trees seem dried upon arrival, to pep them up to condition, place them at an angle in a 20-inch deep V-slit trench in another place of the garden, cover with earth and pack firmly. Mound the soil 8-10 inches over the head. Water thoroughly every second day for eight days prior to planting.

If you were unable to use new ground for your beauties, remove the soil to a depth of two feet, replacing it with fresh earth taken from another part of your garden, which has not supported roses.

Thorough planting care should pay big dividends. To get your roses off to a good start, sock away their roots in a thick mixture of soil and water just before setting them. To combat the inward growing tendency induced by packing, spread the roots widely apart. The average home gardener usually errs in regard to the depth at which the tree should be settled. Set the union of bud and stock ONLY ONE inch below soil level. Pack the earth around the roots as you fill in the hole. Water then thoroughly, and avoid doing so too soon and too generously after planting.

Francis Meilland has use for mulching with straw or rotted manure only in summertime, to check weeds, and conserve moisture in the soil, keeping it loose and friable.

He recommends to mound up new trees planted with the top growth pruned in springtime. The earth should be left over the transplants for a full month, to shield them from the drying effects of the sun, very harmful to their welfare at this delicate stage.

In winter-time, the alert gardener is busier than a beaver. There are spraying, pruning, feeding, amending soils, and considerably more than a baker's dozen of subsidiary chores to be attended to.

A routine spraying of copper sulphate to the tune of 2oz. per three gallons of water will take care of the troublesome spores. As this treatment tends to harm

vegetation, it should be applied at the beginning of winter-time, as the winter-time dormant period prevails.

In prolonged rainy weather rust and black spot are particularly bothersome, as dampness encourages the proliferation of spores. This will be conducive to a great lessening of the blooms, the starved wood being unable to ripen properly to feed them.

Here, a sound bit of advice which goes for all flowers. Spraying and dusting should be made in the evening, to be given a repeat performance at first grey light of dawn. On sunrise, wash thoroughly off insecticides and fungicides, if possible with rain-water, relatively free of harsh mineral contents. This treatment goes to prevent the heat of the Rhodesian sun from touching off a chemical reaction in the insecticides, likely to provoke a kind of vegetable cancer on stems and foliage. Cancerous growth cannot support beautiful and liberal flowering.

Depending on varieties, cultural and local conditions, pruning time varies greatly. As early as the beginning of winter for those species growing under glass that are to be thinned when the vegetation is dormant. As late as after blooming in the early autumn for small-flowered climbers. In Rhodesia, you may prune as early as the end of winter and very lightly, as the dangers of frost are very remote.

Light pruning has the advantage of conserving a good deal of carbohydrates stored in the branches, of which the indiscriminate use of the secateurs would have deprived unduly the tree. Keep always in mind that the object of pruning is overwhelmingly to remove old wood and the only vegetation that the plant cannot feed properly, so as to encourage new growth from the base.

Meilland recommends to prune medium-flowered dwarfs, polyanthus and standards to about two-thirds their length. Strong, vigorous growers should be pruned more lightly, to about five eyes; rank or spare trees, and newly-planted ones, to about four eyes.

Prune bush roses to about a third their length, old wood, twiggy growths should be removed, as well as tangled growth in the centre, branches chafing one against another, and any branch despoiling the form of the bush.

Small-flowered miniatures should be very lightly tampered with, removing only old wood and shortening slightly the tips of new growths. Newly planted ramblers and climbers do not flower the first year, so it is advisable to leave severely alone the vigorous canes that have grown in the summer. As to older plants, cut back all dead wood, and canes that have borne flowers, pruning laterals and sub-laterals to about six eyes.

To avoid giving entrance to diseases through indentations left on the wood by blunt shears, pruning cuts should always be clean and sharp, never ragged. A good additional precaution is to daub tar on the cuts—this treatment going to prevent the loss of precious sap, too.

Now, another sound bit of advice. When using secateurs, give them now and again a dip into some disinfectant, and wipe clean with a cloth from the potentially virus-bearing sap. This helps to prevent the spreading of epidemics from diseased to healthy plants.

Remember to remove sucker growths, coming from the root-stalk the named variety has been grafted upon. Bare the base and cut ruthlessly back those useless drains on the vitality of the plant. You can recognize such by the darker colour and narrower form of their pointed leaves, and also by the fact that they sprout from below the union of bud and stock.

Budding can be done any time in the course of summer, but the earlier, the higher percentage of "takes". Here, Jean Dyens, "king" of France's commercial growers catering for the cut-flower trade, has to offer you a priceless tip. With ramblers and climbers, try out the Benzia rose as an understock.

(Continued on page 47)



If burrowing through the earth bores you, call a halt for a Picardie. Come up for air and enjoy this good brandy. Picardie types above ground and below agree—the password must be "Mine's a Picardie!"

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UNDER THE BAOBAB

A new frying pan will cause omelettes to stick unless you treat it by heating and while still hot scour it over with a pad of grease proof paper and salt.

No wonder women are so good at keeping secrets—when one of them hears a juicy scandal she gets all the rest of the local girls to help her keep it.

Have you tried flavouring tomato soup with a little sugar and extra salt and pepper? It is delicious.

An alternative that really puts a kick into it is a teaspoonful of Angustura Bitters better known as "pink".

Suffering from burst sausages. There are several tips to prevent it. One is to prick it all over

and then dip into boiling water, dry and cook at once.

A dusting hint. When washing dusters put a few drops of polishing oil in the last rinse of water. There will be enough on the duster to catch dust without it flying all over the room and also to help the polished furniture on a non-polish day.

Sarah Jennings

Apple Craft

By Margaret Mount

STEWED apples and cream are delicious, apple compote is even better but we can go one higher still by using a little ingenuity in cooking and a lot of daring in flavours.

We shall soon be able to buy this seasons fresh apples from the Eastern Districts and the cooking varieties are perfect for these dishes.

Hot Apple

Slice or chop some cooking apples after removing the peel and cores. Put a layer in the bottom of a pie dish and dust with brown sugar, scatter on a few sultanas and dabs of butter the same size. Arrange another layer of apples and repeat the butter and sugar but omit the sultanas grating on a little lemon peel instead. Cover with apples, sugar and butter and bake in the oven until tender; serve with hot custard or whipped cream—laced with brandy.

Using the same method but changing the flavours gives us a new dish. On the first layer of apples sprinkle sugar and a little ground cinnamon but no butter, on the second layer put the butter, sugar and some currants which have been soaking or simmered in wine, cover with

apples, sprinkle over the sugar and a very fine layer of fresh breadcrumbs. Dot with butter, make a small well in the middle and pour in two tablespoonsful of water to which you have added two or three drops of vanilla essence. Bake and serve with crisp fingers of pastry or sponge finger biscuits.

Apple Sago

Put a tablespoonful of sago into a saucepan with half a pint of water, some grated lemon peel and two ounces of sugar, add two or three tart apples cut into wedges and cook slowly until thick and the apples soft. Whip quickly with a fork and pour into a mould. When set turn onto a dish and mask with one of the following: Custard, whipped cream or the stiffly whipped white of an egg flavoured with a tablespoonful of marmalade, raspberry jam or apricot which ever flavour you prefer.

Stuffed Apples

Core some large apples, peel them as well if you do not care for the cooked skins. Stuff the centre with a mixture of dry cake or biscuit crumbs, butter and brown sugar. Flavour with a little wine if you have it and bake in a covered dish until just

tender. Serve with whipped cream or glaze with apricot jam and accompany with a thin custard.

Banbury Pie from Oxfordshire.

This, although an ordinary apple pie in most senses, is a nice change. Start with a layer of apple, add some currants and chopped candied peel, ground ginger and cinnamon, dot with butter and repeat these layers until the dish is full. Pour over a cupful of hot water sweetened to taste and cover the pie with your favourite short crust mix. As it comes from the oven golden and fragrant brush the top with milk and sprinkle with sugar.

Savoury Cabbage

Chop the heart of a young cabbage into coarse shreds, boil for ten minutes and then drain. Have ready a greased casserole, cover the bottom with some of the cabbage then add a layer of tart apples, season with salt, pepper and grated nutmeg—I like to add a little sugar but that is a personal taste—fill the dish with these alternate layers and then lard with bacon fat if you have it, otherwise use a little dripping. Cover and after bringing to a good heat allow to simmer slowly for about an hour. This is a delicious vegetable dish and well worth the trouble of preparation.

MUSHROOMS IN SEASON

There are plenty of mushrooms about at the moment, and as long as you are quite sure that they are of the edible kind, they make really good and tasty eating.

Served as a vegetable addition with a roast or as a breakfast dish in their own right they are superb. Simplicity is the keynote with their cooking to get the best flavour and this method is an excellent one.

Peel the mushrooms and take off the stalks. If the stalks are to be used then lightly scrape them. The head of the mushroom may either be left whole or sliced depending on the size. Heat butter in a pan and put in the mushrooms. Keep them moving continually and cook for about ten minutes. Salt and pepper to taste. A drop or two of lemon juice before serving may be liked by some but is not necessary.

HERE'S A HEALTH UNTO YOUR ROSES

(Continued from page 45)

According to him, you just couldn't kill that variety with no thorns on the stem and very few on the leaves. Its great hardihood and remarkable strong growth have accounted for an incredible 100 percent "take" with him.

Now, a word of caution. In your hot and dry conditions, not every species will take readily to Benzia. It's a matter of trial and error. With a view to exploring the tremendous potentialities of Benzia under all conditions, I am very keen to hear about your experiments with it.

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About Ladies by Sue de la Bundu

CXXXVIII



SUE is feeling a little downcast this week, because she has received her first nasty letter from a reader. Personally, that is. The editor got one once, from someone who disagreed with a point Sue had raised, but that was a long time ago and if he has had any since, he has been thoughtful enough not to tell Sue about them.

This particular letter has two very disconcerting features about it. First, and worst, Sue deserves it. Secondly, it arrived just as she was starting to pack the Bundu suitcases for a month at the sea, and has cast a well-earned blight upon the lightheartedness usual on such occasions, as far as Sue herself is concerned. The rest of the family, she is sorry to say, are unperturbed by Mamma's gloom or the cause thereof.

Sue has therefore left them to jolly well get on with the packing themselves, while she writes these words a full month before anyone is going to read them. (It is, however, an ill wind that blows

nobody any good. Having to write four articles in advance has put something of a strain on Sue's resources, and it is nice to have something to write about.)

The reader in question, referring to an article Sue wrote in reply to a previous letter from her, says: "It will take me a long time to recover from the sting in your closing paragraphs. Unpleasant though the lesson is, I shall learn in future to be more careful about writing to ladies who give the impression of kindness."

Oh, dear. This is the editor's comment, and Sue echoes it.

She has already written to this reader privately, a thing she does not usually do, but she repeats her apology in public. Truly, she is very sorry indeed to have hurt anyone's feelings. Her article was flippant and ill-considered—but then, most of her articles are. In this particular instance, though, it shouldn't have been. She should have realised that her correspondent was a deeply sensitive

person, unlike the majority of her readers, who are not sensitive at all, and wouldn't dream of taking anything Sue says seriously enough to be offended by it. They are roused to fury occasionally, certainly, but usually end up by laughing either at Sue or with her, and a lot of them even write to her.

That this is at their own risk they are well aware. Sue has made a promise never to mention names in this feature, but she has never gone any further than that. The thing is, she suspects, that most people don't mind having a little gentle fun poked at the failings and the foibles of mankind, even if, inevitably, some of these happen to be their own. Sue, of course, tends to concentrate rather on those especially apposite to the bundu, these being the only sort she really knows much about. But she hopes that readers will admit that at least she doesn't skim too lightly over, or even avoid, the dam'fool things that she herself does.

Darn it all, none of us is infallible, and surely it helps to laugh at ourselves occasionally. Sue is quite certain that all the best fairy godmothers bestow a sense of humour on those whom they are required to sponsor, and that in the present-day world this is of considerably more practical use than beauty, grace, or any of the more conventional blessings.

However, she supposes that opinions differ on this as on most points, and that there are those who believe that if a sense of humour is misplaced, it would be better to have none at all.

Anyway, she hopes that she is pardoned for her own shortcomings in this direction, and that all is now forgiven and forgotten.

Merry have we met
And merry have we been:
Merry let us part,
And merry meet again.

P.S. She has just received another letter from her reader, and she is forgiven.

Fairyland awaits your children in South Africa!



How they'll love it! And how much good it will do them! Bring the family to the Union next holiday.

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